

"COOK ISLANDERS IN TOWN"

A STUDY OF COOK ISLAND URBANISATION

by

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This Thesis contains no material which has been accepted for the award of any other degree or diploma in any University, and to the best of the author's knowledge and belief contains no copy or paraphrase of material previously published or written by another person, except where due reference has been made.



PREFACE

This study has been long in the making. Initially conceived in Auckland in 1965 it is based on three periods of fieldwork in Rarotonga in 1965-66, 1966-67 and in 1969-70 as well as three periods of field study in Auckland between 1966 and 1969. In the years since this study began I have been successively a staff member at Auckland, Tasmania and Macquarie Universities. The need for a study of Cook Island urbanisation was first suggested to me by Professor K.B. Cumberland at Auckland who did much to stimulate my interest in the Human Geography of the Southwest Pacific area. I also benefited greatly from the individual and collective wisdom of my former colleagues at Auckland, Gerry and Elizabeth Bloomfield, Hans Zwart, Ko Groenewegen and Grant Anderson all vitally concerned themselves with the social and economic problems of the South Pacific Island world. I also owe a considerable debt to Victor de Bruijn formerly Urbanisation Officer, South Pacific Commission for his encouragement and practical assistance especially during the early stages of this project. Mention must also be made of my association with Professor Scott in Hobart. Peter Scott not only helped instill a valuable insight into urban ecological structure by his example but also allowed me scope and opportunity to develop and teach courses on Preindustrial Urbanisation and Urban Sociology.

I am further indebted to the South Pacific Commission for providing two travel grants under their now discontinued Urbanisation Research Programme which enabled me to spend two long field periods on Rarotonga in 1965 and 1966; and to the University of Tasmania for an additional grant to return to the Islands in 1969.. In Rarotonga a debt of gratitude is owed Premier Albert Henry and the Cook Islands Government for assistance and accommodation during 1965 and 1966 and to Alan Law and Timena Robati for hospitality, accommodation and cheer during my long visits of 1967 and 1969-70. Of the many others in Rarotonga whose assistance is gratefully acknowledged mention must be made of: Les Davis, New Zealand High Commissioner; Philip Thompson and Joe Williams,

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Innumerable people, Cook Islanders and Europeans, both in Rarotonga and Auckland, helped to make this work possible by their willingness to assist and offer information. In some cases considerable demands were made upon their time and patience. To all those who cooperated in their various ways - sincere appreciation is noted.

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SUMMARY

Cook Islanders have a very long history of population movement within their Island group and to other parts of the Pacific. Today migration has almost become a part of the social structure. Movement to the town of Avarua began as early as the 1840s and soon came to represent one of the dominant forces in the Island scene. By the late 1940s Cook Islanders had added a further dimension to the migration process in that an ever increasing number were moving to New Zealand many to settle in the urban areas of Auckland and Wellington. Although many emigrated in response to economic stimuli by the mid-1950s one of the main dislodging factors was undoubtedly the activity of the large number of Islanders resident in New Zealand. The movement of Islanders to Avarua and to Auckland is seen as being functionally inter-related. Growing urbanisation on Rarotonga can therefore be seen as a preliminary stage of an urbanisation process which will reach its culmination in the urban centres of New Zealand. Avarua as the centre of European colonisation, administration and economic activity is very much a town 'in transition' from traditional to modern, an arena of socio-economic change where modern influences co-exist and conflict with the traditional. Within the town ethnicity remains an important differentiating characteristic of urban life, as does migration which has produced a continual sifting and sorting of the population as Islanders arrive from the Outer Islands and depart for New Zealand.

Within Auckland, Islanders have occupied some of the city's oldest and most deteriorated housing in areas of generally low social grade. While prejudice and discrimination have played a part in ensuring this settlement pattern also important has been the desire by migrants to preserve traditional cultural values, kinship ties and preferred modes of interaction. Overall the kinship network remains of considerable significance in both attracting

migrants to particular parts of the city and in providing important lines of communication and exchange between migrants in New Zealand and their kinsfolk in the Islands. Such linkages play a major role in shaping social relationships and interaction within the city as well as serving to bind together rural village, urban Avarua and the New Zealand urban community into a complex interlocking network of obligations, rights and exchanges. To this extent it is possible to visualise the Auckland community as being an extension of the Cook Island social system. The transition to urban life has not been without its problems. Traditional village life has often ill-prepared migrants for the highly differentiated and complicated life of town and city. Stresses resulting from urban living and the pressure for social and economic change have in many cases been productive of frustration, anxiety, social deviancy and medical problems.

In the final analysis Cook Islanders continue to live in a number of worlds and to act within a number of frames of reference. At least three worlds seem relevant to the urban Islander: traditional village, urban Avarua and urban Auckland.

GLOSSARY OF RAROTONGAN TERMS AND ABBREVIATIONS

Ara Metua	Remains of ancient paved roadway encircling Rarotonga.
ariki	Paramount chief
atinga	Tribute, often food or labour traditionally paid to tribal elite.
C.I.T.C.	Cook Islands Trading Company.
hare	House
hare umu	Eating house
hau	Hibiscus
kikau	Frond of coconut palm
L.M.S.	London Missionary Society
maniota	<u>Manihot utilissima</u> , arrowroot
manuiri	Immigrant, outsider
matiaapo	A chief of a major lineage
motu	Small coral island
NZPP A3	New Zealand Parliamentary Papers - Annual Reports of the Cook Islands appendaged to the Journals of the N.Z. House of Representatives for each year.
pap'aa	<u>lit.</u> stranger, <u>spec.</u> European
S.S.L.	South Sea Letters and Annual Reports of London Missionary Society officers resident on Rarotonga (microfilm; Mitchell Library, N.S.W.).
tapere	Land holding subdivision; a subdivision
taro	General name for plants of the <u>Colocasia</u> , <u>Xanthosoma</u> and <u>Alocasia</u> species.
taro tarua	Dry planted species of <u>Xanthosoma</u>
toa	<u>Casuarina equisetifolia</u> - ironwood
tutaka	Annual inspection of Rarotongan housing and living conditions carried out by Health Department normally run on a competitive basis between villages.
U.I.T.	United Island Traders
umu	Traditional earth oven
uxorilocal	A system whereby a married couple reside on the land of the wife.
virilocal	A system whereby a married couple reside on the land of the husband.

Throughout the Southwest Pacific area urbanisation and the growth of towns has since the end of World War II accelerated with tremendous speed. To a large extent this growth mirrors the explosive growth of Island populations which in many cases have exceeded rates of three percent per annum. Towns have increasingly become the focal points of growth in the region as well as the arena of socio-economic change. With the exception of some towns in Polynesia most Southwest Pacific towns are essentially 'European' towns - and in some parts Asian centres. While they did have some permanent indigenous town-dwellers in most cases prior to 1945 such people were few, the majority being merely migrant-labourers who returned to their home village after varying periods of residence within the town. After 1945 this situation changed dramatically and by 1960 a more permanent rural-urban migration was in full-flood. Wage employment had by now become a substitute for, or at least an indispensable supplement to, semi-subsistence agriculture and involved many in shifts of residence from the village to the town area. This upsurge in rural-urban movement took place at a time when the Southwest Pacific world was becoming increasingly involved in a spiral of economic, social and political expansion. This growth naturally enough led to increased interest by geographers and anthropologists in Pacific towns and cities and as a result the literature on Pacific towns grew rapidly in the 1960s. The majority of these studies concentrated on individual urban centres although a few have been concerned with the physical, social and economic implications of the urbanisation process (see for example, Bellam, 1970; Brookfield and Brown Glick, 1969; Brookfield and Hart, 1971; de Bruijn, 1963; Kay, 1963a, 1963b; McTaggart, 1963; Oram, 1967; Spoehr, 1963; Walsh, 1964; Whitelaw, 1966).

The first two parts of the present study are set in Rarotonga, largest of the Cook Islands, an archipelago of 15 small and widely scattered Islands occupying an area of over 850,000 square

miles of ocean (see Figure I.1). Rarotonga, the main Island and site of the capital, is a high volcanic Island, approximately 22 miles in circumference with a total land area of 16,602 acres and surrounded by a fringing coral reef. The rest of the Islands are divided physically into two groups. The other seven Islands of the Southern Group include six raised volcanic Islands and one atoll while the seven Northern Islands are all coral atolls with the typical atoll structure and environment. In 1966 the population of Rarotonga was 9,971 and was concentrated in five major village settlements scattered at irregular intervals along the coast (Cook Islands Census 1966:3). The only town and the administrative, commercial and industrial centre of the group is located at Avarua on Rarotonga's north coast. The final part of the study is concerned with the migration of Cook Islanders to New Zealand and their settlement within the Auckland Urban Area.

The movement of peoples has been an important feature of the Cook Island's scene at least since the 1840s. Migration to the town of Avarua on Rarotonga was evident as early as 1847 and soon came to dominate the Island scene. From the late Nineteenth Century Islanders were attracted to the town to engage in labour contracts, wage employment and to escape the often onerous restrictions of the traditional system. Prior to 1920 such a movement was usually of a temporary nature but after this date with the increasing breakdown of the indigenous social structure and weakening of traditional authority the attractions of the town encouraged a more permanent migration of large numbers of Outer Islanders.

Avarua remains essentially an embryonic town and the creation of alien influences. It owes its establishment and subsequent growth to European enterprise. Coming into existence as a missionary, commercial and administrative centre, in the Nineteenth and Twentieth centuries it represented the focal point of European contact and colonisation. The town of today remains largely influenced by its historical background and the particular colonial administration under

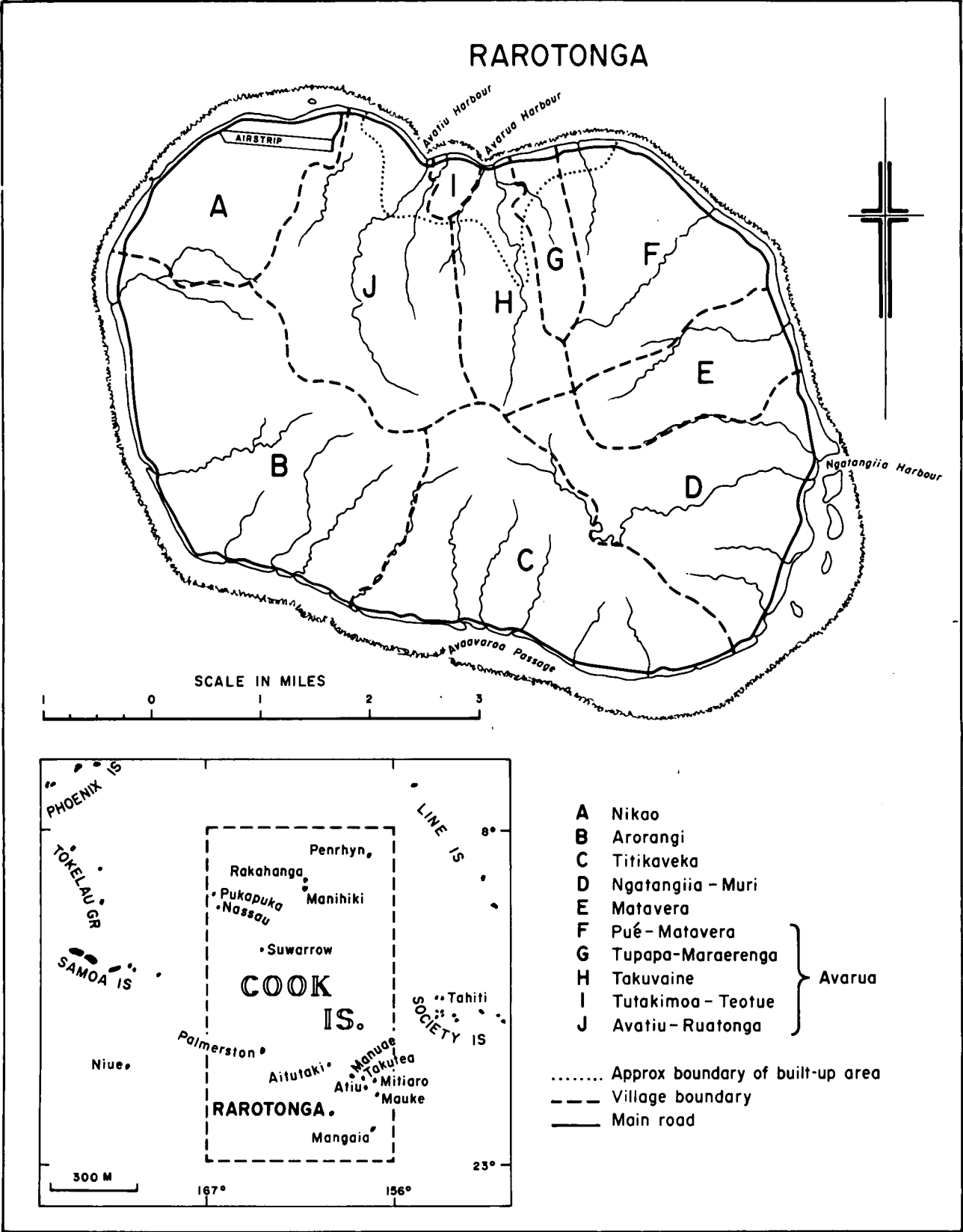


Fig. I.1 Rarotonga and Avarua Location.

which it has grown. As a consequence of this historical and administrative situation, Avarua has come to dominate the Island group. In a traditional situation of strong centrifugal pulls of cultural, tribal and village loyalties the town has added a new dimension. Administrative centralisation together with the port functions and the many social and commercial establishments concomitant on these, has seen the town exert a considerable physical, social and economic influence on the surrounding Islands. Much of this has been reflected in the pattern of the town's growth. Since at least the 1860s the town has acted as a magnet drawing from the immediate hinterland and the Outer Islands both permanent and temporary migrants. Today, many of the people resident within Avarua were born elsewhere. All this has resulted in a considerably heterogeneous population. Whilst the majority of the town's population are Cook Islanders, they represent a mixture of migrants from 12 Islands as well as a small foreign-born element. An overwhelming proportion of the town's population are, therefore, migrants or the children of migrants born on Rarotonga. This ethnic diversity or pluralism is of overwhelming significance in understanding the town's social geography.

During the past three decades Cook Islanders have exhibited a further extension of the urbanisation process in that an ever-increasing stream of migrants have left the Islands to settle permanently in New Zealand. Some moved to seek employment, some because they wanted a mainland education for themselves or their children. Others migrated to experience a larger world that would allow them to escape the traditional restrictions and obligations of the Island society. Significantly, however, a large proportion emigrated in response to overtures by kinsfolk and friends already established in New Zealand. By 1966 more than 8,000 Cook Islanders had settled in New Zealand, the majority within the Auckland Urban Area. Despite the fact that Cook Islanders have been extended full citizenship rights and are eligible for all the benefits of the New Zealand welfare and

educational systems, and despite the fact that New Zealand employers generally welcomed them as an asset to a chronically under strength labour force, most migrants have chosen to restrict their social contacts to other Islanders. Many exist in a virtually Polynesian world. They live in close proximity to other Islanders, work with other Islanders, and often speak Island languages and eat Island foods. To this extent, the Auckland Cook Island community forms a discrete social community loosely held together by a common background, kinship linkages, and common traditional values. One of the most striking features of the Cook Island and other Polynesian groups in Auckland is their apparent residential concentration in particular parts of the city. Whilst nowhere does this approach the highly segregated ghetto situation of many North American cities, there are nevertheless areas within Auckland which since the mid 1950s have become progressively more and more Polynesian in their ethnic character. A number of factors have been instrumental in producing this concentration. In part it can be viewed as an instance of the general process of residential differentiation and in part it is due to the aggregate effects of socio-economic and cultural factors.

The present study marks a considerable advance in research on Pacific urban communities in that it attempts to follow the urbanisation process through from the Island setting to final settlement in a metropolitan area. To this end the movement of Islanders to Avarua and the settlement of Islanders in Auckland are regarded as being functionally interrelated. Cook Island movement to Avarua can therefore be seen as a preliminary stage of urbanisation that will reach its culmination in the urban areas and small towns of New Zealand. This study will therefore analyse the patterns of and the reasons for rural-urban migration and the physical form and socio-economic structure of a small colonial town in an undeveloped non-Western area. It is also concerned with the settlement and integration of a Polynesian group within New Zealand's largest urban area. This will offer the opportunity to

examine the interaction of traditional cultural characteristics with the economic and social demands of modern urban society. Part of this study is therefore concerned with the adaption of a 'visible' ethnic minority group to the conditions of a large New Zealand urban area.

Cook Islanders in Avarua and Auckland are influenced by a wide variety of complex factors, among the most important being their cultural background and valued attitudes and forms of interaction which greatly affect their social and economic adaption to the new environment.

This study is divided into five parts. Part I consists of a general description of the historical and demographic background of urban growth, migration and emigration as well as a brief comment on contemporary Rarotongan social and economic conditions.

Part II is divided into four chapters and consists mainly of a description of the town of Avarua. The first section (Chapter II) presents an analysis of the physical and housing structure of the town as well as the results of a household survey. Chapter III deals with the household and demographic structure of the town's inhabitants. Chapter IV concentrates on a study of inter-Island migrants within the town while the final chapter attempts a factorial ecological analysis of the town's socio-economic structure.

Part III presents a brief analysis of migration to New Zealand and thus forms a logical link between the Island and metropolitan urban scene.

Part IV comprises three chapters and is mainly concerned with an account of certain aspects of Cook Island settlement in Auckland. This section is in essence a small-scale community study in its own right even though the links with Avarua and traditional Cook Island society are stressed. No attempt is made to give a detailed description of the 'whole' of Cook Island social life in Auckland. Instead the writer dwells mainly on the pattern of settlement, residential segregation, demographic structure and aspects of the intra and inter-group social relationships between Islanders and the Auckland community.

Parts II and III of this thesis are in some respects distinct but complementary. It is possible to read them independently of each other but they are linked by the treatment of urbanisation as a continuous process and the stressing of Island-Auckland links.

Finally, in Part V the author attempts to briefly bring together the main findings of the study and to assess some of the general features of migration and urbanisation of Cook Islanders. Part I is largely based on an analysis of published and unpublished documentary material especially the unpublished letters and reports of the London Missionary Society. Part II is based largely on, (a) a housing and social survey of the 551 households of Avarua carried out in 1965-66 by the author with the assistance of officers of the Cook Island's Public Health Department.

(b) A detailed social survey of all households in the three village areas of Takuvaine, Tatakimoa and Avatiu-Atupa.

(c) A random survey of migrants living in Avarua.

(d) An urban employment survey of 316 persons working in the town.

Part III draws on material collected from two surveys of migrants to New Zealand, one a random survey of intending emigrants in 1965 (carried out in Karotongga) and one a random survey of recent arrivals in Auckland.

Part IV makes use of material gathered from a random survey of Cook Island households in Auckland carried out in 1968-1969*.

In essence this is a study of a small colonial town in the underdeveloped world and the settlement of an underdeveloped Island people within a modern Western urban area. The author hopes to illustrate that contrary to popular opinion these migrants do not

completely divest themselves of traditional and kinship ties but continue to interact in many urban situations according to traditional norms and patterns. To this extent urbanisation has not produced an 'urban'

* A discussion of all surveys used in this study may be found in Appendix A.

personality as postulated by Tönnies, Redfield and Wirth (see for example Pahl, 1966).

Western scholars have nearly always implied that the urban dweller should, as far as possible, be mobile and unencumbered by traditional considerations, particularly kinship ties and obligations. Such an approach implies a concept of one-way change where the urban newcomer is seen as moving directly from his old traditional culture to the new urban society. These migrants were assumed to be cut off from traditional institutions and ties and thus more or less forced to assimilate to the new urban host society. In recent years, however, there has emerged an overwhelming body of evidence to suggest that particular subcommunities within the Western and Non-western city differ from what Wirth and his supporters have claimed. The study of newcomers to the Western city and the re-examination of inner-city working class residential areas has led a number of writers to suggest the existence of 'urban villages' within the inner areas of cities in which there is a high level of social cohesion based on kinship networks and a high degree of affective primary contacts (see for example, Abu-Lughod, 1961; Gans, 1962; Willmott and Young, 1966; Mayer, 1971). The point seems to be that cities are comprised of a mosaic of subgroups and subcommunities and that the process of urbanisation does not act so much on the community or communities as a whole but on individuals and groups differentially placed in the urban social structure.

Studies of preindustrial/colonial towns and cities seem to make it increasingly apparent that Wirth failed to recognise that the city is shaped along certain lines by the broader embracing society. Thus we must consider the city as a dependent rather than an independent variable for much of its ecological and social structure is determined by forces external to it. It follows that the inadequacy of Wirth's theory is the result of attempting to deal with the urban community as an integrated whole. There necessitates a closer examination of subcommunities within the urban society. McGee points out that in the

cities of Southeast Asia the old patterns of economic organisation typical of the traditional city (that is, the bazaar and guild), persist side by side with the rational organisation of production and exchange typical of the modern city (McGee, 1967: 126). Not only is there a dualism in economic structure but also as McGee writes, "The Southeast Asian city is a mosaic of cultural and racial worlds each invoking the memory of other lands and people" (McGee, 1967: 24-25). The colonial city, therefore, brought together a large number of dissimilar groups with widely varying social structures and backgrounds. More often than not these groups were conscious of their own existence and often opposed to one another on the basis of colour, cultural background and urban experience. Within the town they often sought to live an independent way of life often strikingly different to that of their neighbours. In the patterning of relationships within the town, therefore, ethnicity is one of the most striking categories and membership of a particular ethnic or cultural group often determines behavioural patterns. Every urban dweller was also involved in a complex network of social relations composed of ties with kinsfolk, fellow villagers, workmates, friends and acquaintances. Kinship forms the core of this network and helps introduce an element of stability into what is otherwise a remarkably fluid system. Kinship serves to hold together not only individuals within the town but also provides important links between town and rural village. Allegiance to a particular village group or tribe also operates as providing a badge of identity to which most respond. Thus in the cities of the underdeveloped world, despite relatively high densities, life has not necessarily become largely secularised, great differentiation of function has not taken place and the way of life has not changed markedly for many of the indigenous population groups. Increased sophistication, rationality in behaviour and cosmopolitanism of outlook do not necessarily occur because an 'urban way of life' similar to that postulated by Wirth is not necessarily emerging except perhaps amongst a small urban elite and upper middle class. There is no reason, therefore, to assume that the Western social pattern is the

universal one. Many colonial cities are more collections of village communities in which traditional kinship relationships are all important. Bogue and Zachariah found that frequently rural patterns and institutions persist in the city as the rural migrant often finds it easier to accommodate rather than assimilate to the new urban ways of life (Bogue and Zachariah, 1962). Mayer arrived at the same conclusion in his study of Bantu migrants in East London - they will never become completely urban no matter how long they remain in the city. Yet it was possible for these migrants to reach a modus vivendi with regards the new urban institutions and values. Mayer writes, "A man can easily begin to practice town-ways for the benefit of his friends in East London, yet shed them for the benefit of his more orthodox-minded friends at home" (Mayer, 1962: 289-290) and Southall aptly comments, "The switch of action patterns from the rural to the urban set of objectives is as rapid as the migrant's journey to town" (Southall, 1961:19). This so-called ruralisation of the city is important because it introduces primary contacts into the city. Mayer's concept of 'encapsulation' also seems to be of relevance when considering the settlement of migrants in Avarua and Auckland. This is, suitably illustrated in parts II and IV of this study.

On the other hand, urban conditions and the social and economic stresses resulting from contact with a wider society and cash economy have produced in some cases a greater incidence of medical disorder, social deviancy and personal disorientation. The everyday problems of coping with an urban way of life and social change largely divorced from the communal social security of the village community often produce considerable adjustment problems.

In approaching this study two points must be stressed. Firstly, Cook Islanders have a very long established tradition of population movement within the Group and throughout the Pacific area. In many respects migration has now become a part of the traditional social structure, mobility is considered a normal part of an adult's

life cycle and young people are expected to move to Avarua or New Zealand at some stage of their life. Secondly, Cook Islanders are immersed in a number of worlds. The rural village hinterland, the Avarua urban system and the Auckland urban system are not simply arbitrary divisions. They are three different milieu within which Cook Islanders move and participate to differing degrees. These 'three worlds' are reflected in varying influences, different qualities, relationships and different situations of interaction which most Cook Islanders readily recognise and respond to.

PART I

BACKGROUND TO URBANISATION

HISTORY OF CULTURE, - CONTACT AND URBAN GROWTHEarly Rarotonga

When Rarotonga was first reported to the outside world in 1823 the population was probably somewhere in the region of 6000 - 7000 persons, divided into three major sub-tribes each under the leadership of a paramount chief or ariki. Each tribal family group had its own hamlet located near the major taro plantings in the valleys and swamps. Each ariki was responsible for a particular district within which he allocated land known as tapere to the sub-chief (matiaapo) of the major family groups. Each matiaapo further sub-divided the land until finally the heads of the major family units were responsible for a small plot of land.

As far as can be established the first Europeans to take up permanent residence on the Island were missionaries of the London Missionary Society (L.M.S.) who established a mission station at Avarua in 1827. By 1830 the missionaries zeal had been such that almost all of the indigenous inhabitants were at least nominally Christian. By 1831 considerable changes had already been made. On his return to the Island Williams had cause to remark:

"... the settlement at Avarua surpassed in order and neatness any other of our Missionary Stations. A new Chapel had been erected, of considerable elevation, and superior construction, having at each end porticoes, which were approached by flights of steps of hewn coral. The school-house, which was about 100 feet in length, stood by its side, and both it and the chapel were encircled by a neat stone wall. In front, and at equal distances, some toa, or casuarina trees, reared their stately heads, through the graceful foliage of which the snow-white buildings presented themselves, and at the back were two houses larger than the generality of those which comprise the settlement, surrounded also with stone walls, and having spacious gardens in front. These were the dwellings of the chief and Missionary. The pathways were strewn with white coral and black pebbles... stretching away to the right and left for at least a mile in each direction, we saw the neat white cottages of the natives, built on the same plan as those of the chief and Missionary, but on a smaller scale. A wide pathway ran through the middle of the settlement, on either side of which stood the native dwellings; these; with their windows and doors neatly painted, and with

front gardens tastefully laid out, and well stocked with flowers and shrubs, gave to the whole scene an air of comfort and respectability." (Williams, 1847: 99).

In the years to follow, the L.M.S. set about consolidating its position on Rarotonga. Initially confronted with the problem of teaching and converting a population widely scattered in small population clusters, the early evangelists persuaded their flock to relocate in a single settlement around the mission station at Avarua. Successful at first, this policy soon produced considerable strain on the food resources of the Avarua district and as the novelty of the new settlement wore off more and more people began drifting back to their traditional lands. By 1828 the Arorangi people had left to establish their own settlement at Arorangi. Thereafter, Avarua and Arorangi remained as the two sole population concentrations until some three decades later when the Ngatangiaa people were to establish a village in their own right. The London Missionary Society's efforts to centralise the native population around the mission headquarters occasioned little disruption to social life presumably because all the inhabitants 'recognised their common origin and allegiance to a common high chief' (Crocombe, 1964:65). The mission inspired establishment of villages did not necessarily produce a change in traditional attitudes to the land and its cultivation as many people retained house sites and gardens on or near their traditional tapere. By the early 1840s native dwellings had ceased to be compacted into highly concentrated clusters about the mission station and now approximated a shoe-string appearance along the main coastal roadway. By 1846 there were estimated to be 221 such houses strung out along Avarua's waterfront from Pue to Avatiu accommodating some 920 persons (Boston Daily Whig, 1 August, 1846).

The missionary order did not confine its activities to conversion but also attempted to instill in the natives attitudes

and behavioural patterns sympathetic for the emergence of a civilised and moral order. A rigid code of moral and personal behaviour was formulated and with the aid of district judges and police, rigorously enforced. Changes were effected in native dress and housing forms, and families were encouraged to abandon the traditional practice of accommodating several families together under one roof. Despite the missionaries more obvious influence on the traditional Rarotongan system they were always at great pains to bolster up the authority of the traditional elite and treat them as authorities in most local matters outside the immediate jurisdiction of the church. Such a policy of indirect rule and flexible intervention in secular affairs did much to enhance the political power and prestige of the ariki. Very early in the Nineteenth Century the missionaries insisted on the Rarotongans utilising a number of introduced products such as cloth, cotton, goods, metal implements and building materials which by the late 1830s were readily acquirable by trading with visiting whaling ships. In response to increased shipping calls, a flourishing trade in fresh fruit, vegetables and firewood soon developed. Trade of this type was generally under the control of the chiefs and in many cases functioned within the confines of the kinship network. By the 1850s Avarua had become an important revictualing port-of-call for whaling and trading ships and in the same decade an infant trade between the Rarotonga and Auckland in coffee, arrowroot, oranges, pineapples and bananas was established. The traditional ariki gained considerable prestige as well as economic gain from such undertakings and by 1860 many Rarotongans were enmeshed in a network of market relations, first by provisioning visiting trading vessels and later by the development of a small trade with New Zealand, Tahiti and Samoa. Much of this trade owed its foundations to the changes introduced by the missionaries in the traditional economic life. A variety of new crops had been

introduced soon after 1827 many of which ultimately became incorporated within the customary subsistence system. The natives were instructed how to cultivate and weave cotton, and sweet potatoes were introduced first as a subsistence crop, but later as an article of trade. Buzacott, one of the early missionaries, introduced arrowroot, tapioca, rice and coffee but of these only arrowroot flourished and became an item of trade.

The mid 1850s mark the high-water point of missionary achievement. Almost all of the indigenous population had been converted to Christianity and could read and write. European clothing had been introduced, iron-roofed single family houses in stone and coral built, many cash crops adopted and a strict moral and legal code of behaviour introduced. The years after 1856 represent a gradual waning of mission authority and influence brought about in part by the growth of significant non-indigenous element in the population. Although a few European traders had been permitted to settle prior to 1850, large scale immigration had been strongly opposed by the L.M.S. who prevailed upon the ariki to pass a series of laws prohibiting or at least severely restricting European settlement. This policy of exclusion continued up until the mid 1850s and until this date there was never more than a handful of Europeans resident on the Island, most of whom had taken local wives and been absorbed into the indigenous social system. By mid-century the growing metropolitan demand for tropical products brought an increasing number of prospective settlers and traders to the Island and after 1856 the ariki decided to relax their stringent immigration laws. Most of the new arrivals after this date were of British extraction and desirous of obtaining cheap land on which to establish coffee, cotton, coconut or fruit plantations. To this end most were initially frustrated in their desire to purchase or lease land as the chiefs were unwilling to dispose of anything more than a few acres on short-term use-hold tenures.

Consequently, most European plantation enterprises were short-lived such as Alexander Cunningham's sugar plantation established in 1836 which survived only a few years, or Donald and Edenborough's cotton plantation 40 years later which suffered a similar fate. Most Europeans eventually established themselves either as resident traders in Avarua or went into commercial or service undertakings. By 1881 there were more than 70 Europeans on the Island as well as a handful of Chinese residents, Negroes and mixed-bloods.

The increase in the number of Europeans after 1870 on the one hand contributed to the rapid demise of missionary influence on Island life which in turn led to a softening in chiefly attitudes towards outsiders, while on the other hand it undoubtedly encouraged many Rarotongans to take up the mantle of individual economic enterprise outside the confines of the chiefly system. It is during these years with the gradual relaxation of immigration restrictions on Rarotonga and emigration restrictions in the Outer Islands, that large numbers of Outer Islanders began moving to Rarotonga thus contributing to the large foreign-born element resident on that Island. By the late 1880s, Rarotonga with its productive hinterland and good anchorages, began to emerge as the commercial and 'metropolitan' centre of the Cook Islands. By the next decade, European and Outer Island migrants constituted a sizeable minority group on Rarotonga outside the jurisdiction of the traditional social system to which the locally-born owed allegiance.

The census of 1895 disclosed a population of 1,623 Rarotongans, 282 Mangaian, 77 Aitutakians, 139 from Atiu, Manuae and Mitiaro and 186 other Islanders as well as 98 Europeans, 38 half-castes and 11 Chinese (NZPP A3 1896:3). Most of these non-indigenous groups were concentrated in the Avarua district, where almost 42 percent of the population was foreign-born. Some of the immigrants were scattered throughout the Island but Europeans, half-castes and Chinese were almost exclusively concentrated in

Avarua (NZPP A3 1896:3). There seems little doubt that the presence of a large number of immigrants on Rarotonga did much to contribute to the decay of mission and ariki influence and position. Many of the new arrivals were, according to contemporary account, very much an independent force in Island affairs, disruptive, lawless and often totally immoral. Certainly the mixed population of Avarua and the undercurrent of dissatisfaction with mission and chiefly authority over land and everyday affairs was one factor in producing agitation for British political intervention. This, together with an apparently unfounded rumour of French intervention in the Islands, led to a petition for British protection. Britain yielded to such pressure and finally declared a protectorate over the Islands in 1888 and a few years later appointed a Resident Agent on Rarotonga.

During the short-lived Protectorate much was done to establish an administration along European lines. A Federal Parliament on Rarotonga was constituted with representatives from all the Southern Islands and routine administrative services such as Customs and Posts were successfully established. Indigenous economic enterprise flourished during this period, native owned and operated schooners trading throughout the group as well as to Tahiti and Auckland. In addition, in 1885 the Auckland firm of Donald and Edenborough subsidised by the New Zealand Government began a regular shipping service between Auckland and Avarua via Tonga, Samoa and Tahiti. In respect to wide social and economic reform, however, the Protectorate was largely unsuccessful. Attempts to persuade the arikis to lease more land to Europeans failed while little was done to improve or co-ordinate shipping, handling and storage facilities or to provide the basis for a scientifically based agricultural policy. The Protectorate years did, however, see the addition of an administrative fiat to the emergent town of Avarua. From a small collection of trading houses, tea shops, churches and residences the town grew considerably in the last 15 years of the Nineteenth Century. European immigration and western

civilisation had by 1891 already produced its impact on the local landscape. As Moss remarked in 1891,

"I ascertained upon my arrival, that 19 houses of different kinds ... were engaged in the sale of liquors drunk upon the premises. The keepers of these houses were generally Chinamen or Natives, and they were open at all hours, and to all people, whether natives or foreigners. Very much drunkenness was the result. The worst of these are, by universal agreement, declared to be the men from Mangaia who come in considerable numbers to seek employment on Rarotonga ..." (NZPP A3 1891:13).

To this social environment the Protectorate added the trappings of secular colonial administration. In 1891 the paramount ariki of Avarua granted $4\frac{1}{2}$ acres for a British residency at Ngatipa and a few years later the former property of a merchant-trader opposite the main wharf was resumed by the Crown as an administrative centre comprising Post Office, Bond Store, Customs House, Paymaster and Shipping Office (C.I. Gazette, Oct. 9, 1898). A few years previous had seen the establishment of a parliament building while in 1891 the first non-mission school had opened its doors. Avarua by the end of the Nineteenth Century resembled a small colonial port-town with its five tea shops (many run by Chinese), general merchant-traders and importers, including the two principal trading firms of Donald and Edenborough and Societe Commercial de L'Oceanie, a lumberyard, banks, bakeries, a blacksmith, schools, hospital, the U.S.S. Co. office and storage sheds, general administrative offices and churches. Captain Hore on a visit in the S.S. "John Williams" had cause to remark on the variety of the town's activities:

"Rarotonga is advancing in many ways. Walking along the main street of its sea front, to the Post Office, one encounters many equestrians, buggies, carts, pneumatic tyred cycles. You may find establishments of Roman Catholics, of Seventh Day Adventist and hear praise of the Latter-Day Saints, as expounded by their representative. You may consult a Doctor, you may buy a local paper, you may see bags, boxes and bales of valuable native produce being shipped in vessels for export. Parliament is sitting, and "questions" there being discussed, which are agitating all good citizens of "education", "home rule", "liquor traffic", "land tax". This is almost the only place

in the Islands where the church is not the most conspicuous object of a distant approaching view, it is "round the corner", away from this front street of busy affairs ..." (Capt. Hore's Narrative of Voyage No. 2, "S.S. John Williams", L.M.S. Typescript 1895:11).

Efforts to persuade the arikis to release more land to foreigners continued throughout the 1890s and into the early years of the Twentieth Century, but met with little success. A few Europeans managed to obtain leases on Rarotonga but their numbers never exceeded 25 and the land involved rarely exceeded 1700 acres (See Crocombe, 1964: 74).

After 1901 the Cook Islands became an integral territorial part of New Zealand*. In the period that followed, all significant political power was transferred to the New Zealand appointed Resident Commissioner and the Islands although nominally part of New Zealand, were administered along colonial lines. The Federal Parliament and native judiciary were dismissed and their powers assumed by expatriate officers.

The first New Zealand administrator, Gudgeon, was extremely concerned with stimulating economic development and hoped that the Islands would become the tropical garden of New Zealand. It soon became evident, however, that the Islanders did not take too readily to commercial agriculture. Gudgeon believed this was due to the stifling influence of the ariki, the lack of security in land and a general lack of application by the particular growers. Consequently, efforts were made to circumscribe traditional chiefly powers in land, judicial and political affairs. A Land Court was established to investigate all titles and claims to land. Contrary to his hopes, however, the people did not respond with increased effort and resourcefulness but continued in the old fashion of lethargy as before. Despite these setbacks the Administration's initial interest in economic development did in fact

* See Ross (1964) for a discussion of the period leading up to New Zealand annexation.

result in increased production, albeit shortlived. To a large extent economic growth was restricted by factors beyond local control, a hurricane in 1914 and the decline in shipping occasioned by the First World War.

When the vision of increased economic production and rapid growth failed to materialise the Administration replaced its former interest in the economy with a growing emphasis on health, education and social welfare. In the words of the official Islands Report of 1909, "The Islanders themselves are the real wealth of the Islands. To improve their general welfare, their health and education, as well as their material prosperity, is the task of the Administration" (NZPP A3 1909:7). After this date the New Zealand Administration accepted full responsibility for the Islands health and education services and regularly subsidised the local government with large grants from New Zealand. Little emphasis was placed on economic development until the mid 1960s.

POPULATION CHANGE IN THE NINETEENTH CENTURY

The population of Rarotonga first came to world attention with the arrival of the L.M.S. missionaries in 1823. In the ensuing years the origin, size, distribution and characteristics of the population became matters of considerable concern to the early evangelists. For some 72 years the only information available on the population was that recorded by the mission officers. Such observances, rough estimates and 'detailed' figures as were collected appeared at irregular intervals in a wide variety of forms, in personal letters, annual reports, books and proto-census takings. Considerable reference was made to the level of births, deaths and migrations in the population as well as to the periodic onset of famine and epidemic. The period extending from John Williams arrival in 1823 until New Zealand's annexation of the Island in 1901 was in many ways a crucial one in the Island's demographic history. When Williams first set foot on Rarotonga

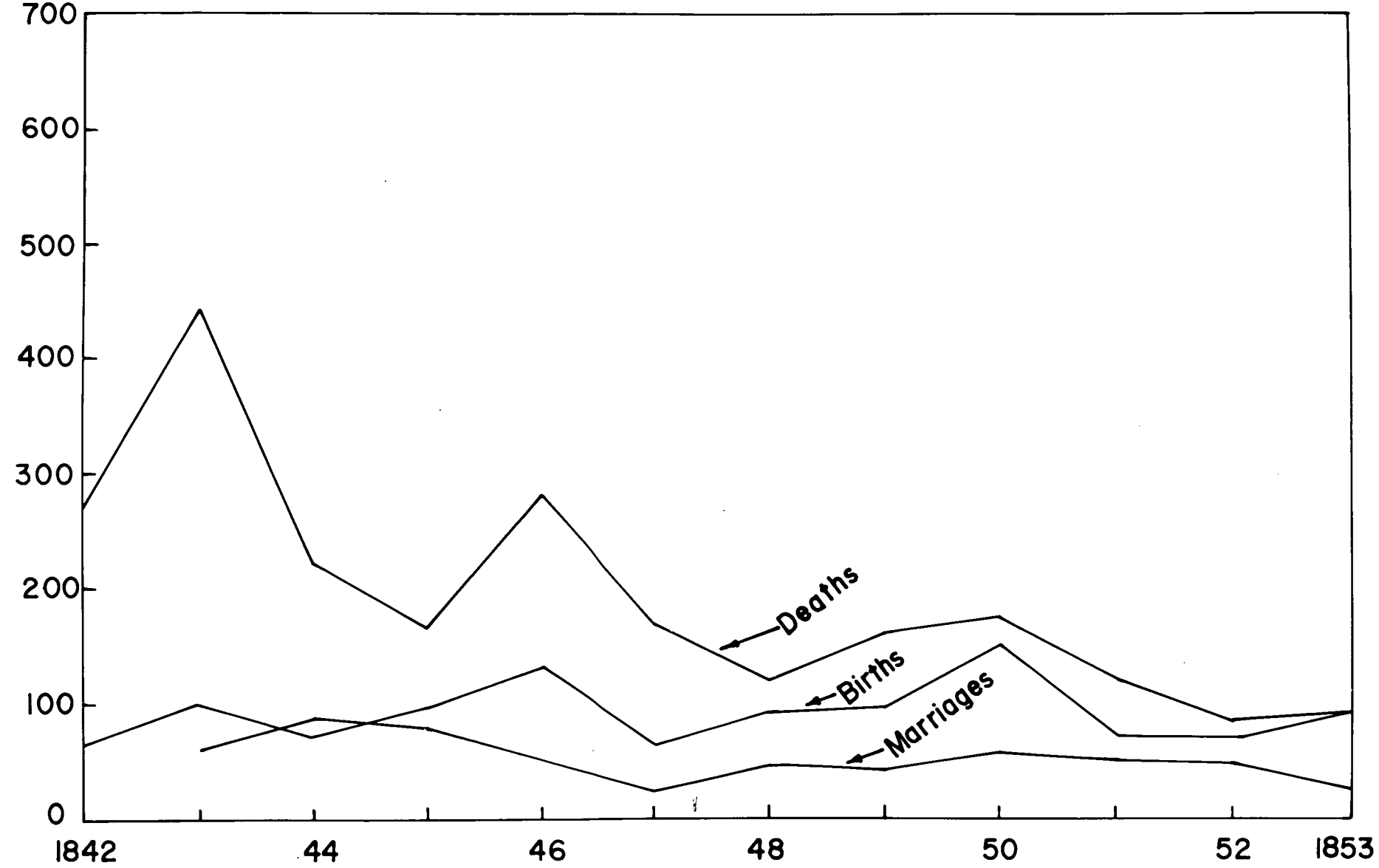
there were perhaps as many as 7,000 persons living on the Island (Williams, 1838:19). By the late 1860s high mortality and reduced fertility had trimmed this figure to 1856 (Chalmers, 1867: in Lovett, 1903:82), less than one quarter of the pre-contact level, and by the turn of the century Rarotonga could only boast some 1,509 indigenous inhabitants. (NZPP A3.1902:16). The very crucial nature of these years makes the lack of regular and reliable population data extremely frustrating. Even more unfortunate, however, is the virtual dearth of population information available between 1854 and 1895 as it is during these years that many important social and economic changes took place.

A number of major themes dominate the 143 years history of Rarotongan population growth: the Nineteenth Century depopulation of native Rarotongans; the levelling-off of population decline and subsequent rapid growth; the immigration of Outer Islanders and their movement to the Avarua district; the long history of labour recruitment; the growth of a small but significant foreign born element in the population and the mid-Twentieth Century emigration to New Zealand. The first theme has now passed into history while the others are now being replaced by the population movement to the New Zealand mainland as the dominant factor in demographic change.

In pre-contact Rarotonga the effect of the interplay of demographic with other variables was probably to preserve a rough balance between births and deaths. There must have been, of course, periods of population growth and the trend of numbers on a long view must have been upwards, but the actual rate of growth would have been slight overall and long term trends often almost totally obscured by the amplitude of short-term fluctuations. The population resources relationship of the pre-contact system must have been finely balanced. Social structures were rigid, economy efficient. Given the favourable climatic conditions and association of root cropping and sea foods, episodic and recurrent

famines were limited. Abortion and infanticide were reputedly fairly prevalent while warfare and the rational limitation of births may have helped to restrict population numbers. There can be little doubt that the arrival of Europeans and European civilisation did much to disturb the traditional balance between population and environment. From the scattered and incomplete information available it is clear that the population suffered a severe decline during the Nineteenth Century and that introduced diseases greatly contributed to this process. Even if Williams 1823 estimate is discounted, Rarotonga's population still decreased from approximately 4,300 in 1840 (McArthur, 1967:167) to 1,509 Rarotongan-born in 1901 (NZPP A3 1902:16). The period of most rapid population decline would seem to centre on the years 1838-1843 during which time the Island was subjected to, a series of "virulent diseases ... which spread on all sided like the plague ... mortality went on increasing, until the deaths amounted to 500 annually, and the births scarcely 100" (Buzacott in Sunderland and Buzacott, 1866: 104-105), a hurricane, widespread storms and an outbreak of dysentery which caused many deaths (Pittman, 1843 SSL July 3). In 1843 total deaths amounted to 443 and births to only 100 (Gill, 1856:72). Years of heavy mortality occurred periodically after 1830 due to the independent operation of introduced diseases accentuated by frequent food shortages. It is highly probable that many of the more severe diseases were introduced from Tahiti via the medium of the crew of visiting ships. Whatever their point of origin there can be no doubting their deadliness in the years after 1830. Although the population decline was continuous, it was not a steady process and rather progressed in a series of wave-like motions, periods of relative stability being separated by periods of high mortality. Such a progression may be seen in the birth and death figures collected by W. Gill for the 12 years after 1842 (Figure I.2). Presumably a year of demographic crisis would have

Fig. I.2 Births and Deaths Rarotonga 1842-1853.



had the effect of weeding out many of the more vulnerable in the population, in both an economic and a physiological sense. Hence, years of heavy mortality were as often as not followed by short periods of lower mortality. Such can be seen from the data plotted in Figure I.2. Years of high mortality (1843, 1846, 1850) were invariably separated by short periods of lower mortality (1845, 1843, 1852). If such a pattern were to confirm to Sundt's law in miniature (See Wrigley, 1969:69) then it would be possible to expect some evidence of marriages being postponed in time of demographic upheaval to be taken up at a later more propitious time, with a resultant spurt of births coinciding with the reduction of deaths to give a short period of population growth. While the available figures are very limited in scope and time span it is possible to see something approaching this classical explanation in the data. Whatever the progression of population growth after 1842, by 1853 there had been 2,290 deaths and only 1,101 births (calculated from Gill, 1856:72). Population estimates are few and far between after 1854. From Chalmer's estimate of just over 1,800 persons in 1867 Rarotonga's population hovered about the 2,000 mark until the early years of the Twentieth Century. Appendix B shows the general course of population decline between 1823 and 1902. Equivalent estimates for Avarua's population are harder to come by. Buzacott's census of Avarua in 1840 indicated a population of 1,183 (Buzacott, 1840) whereas figures given six years later in the Boston Daily Whig recorded a population of 920 persons. Buzacott records a further figure in 1854 when the population was 735 (Buzacott, 1854 SSL Jan 12) and thereafter no figures are available until the official census of 1895 which indicated a population of 1,102 persons resident within the Avarua district (NZPP A3 1896:3).

Birth and Death in the Nineteenth Century

The earliest contemporary figures on Island fertility and mortality are those compiled by the London Missionary Society.

In some cases the missionaries attempted to keep a register of all births and deaths as far as they came into their knowledge. The earliest extent statistics date from the 1834-38 period when a series of returns were submitted for the Takitumu district. In addition to these figures, a register of all births and deaths was kept for Rarotonga in the period 1842-1853 after which detailed figures are very rare. These early reports suggest crude birth rates ranging from 15-30 per thousand and death rates between 40 and 134 per thousand. While these figures apply only to a 12 year span it would seem on the basis of what scanty evidence is available, that mortality rates must have been considerably higher in the decade prior to 1840.

Apart from a few scattered and incomplete references, regular birth and death figures are not available until 1901. Birth and death returns for the 1902-1917 period were collected by the European and native ministers of the different churches who unfortunately were under no penalty or obligation to make any return. It is not until after April 1917 when section 15 of the Cook Islands Act 1915 came into operation that regular administrative records of vital statistics were kept. Figures available for the years between 1902 and 1917 indicate high birth rates and high death rates. Between 1902 and 1911, for example, total births only exceeded deaths by a mere 12. The crude birth rate for these years averaged 43.6 per thousand while the crude death rate was an almost identical 43.4 per thousand*. As far as can be gathered from the rather incomplete information available, crude birth rates in the first decade of the Twentieth Century were considerably in excess of what had been the case in the last few decades of the previous century. The reasons underlying this change in fertility are very difficult to assign with any certainty. Regarding trends during the Nineteenth Century the likelihood of a recurrent or localised low fertility pattern being associated with age-specific mortality, venereal diseases and abortion

* Calculated for the indigenous population only.

seems fairly likely. Andrews in 1892 commented upon the widespread distribution of syphilis and gonorrhea among the population and also to the fact that abortions were commonplace: "I think that long-standing neglected gonorrhea (in the females), combined with a too early, frequent, and promiscuous intercourse of the sexes, will go a long way to explain the low birth rate of the native population" (Andrews, NZPP A3 1894:18). Leaving aside Andrews' Victorian concern with "excessive promiscuity" there seems little doubt that the birth rate was low and for the reasons he suggests. Andrews' mentions a figure of 25.92 births per thousand for the whole group in 1892. Whatever the explanation for the low birth rate in the years prior to 1902 it seems remarkable that the rate could almost double in only ten years. Most probably the answer lies in the very dubious nature of the statistics and in the haphazard way in which they were collected prior to 1917.

The causes of high mortality were also many and complex. Undoubtedly years of high mortality were closely associated with outbreaks of non-indigenous diseases. Epidemics occurred at frequent intervals throughout the first half of the Nineteenth Century, dysentery in 1829-31, 1838 and 1843, influenza in 1837, 1847, 1848 and 1851, whooping cough in 1848 (the same year as an outbreak in Hawaii (See Schmitt, 1968:37), mumps in 1850, measles in 1854 and again in conjunction with dysentery in 1857. Venereal disease and tuberculosis were also prominent and extended their influence well into the Twentieth Century. Faced with such outbreaks and in view of the limited state of medical knowledge, poor infant care, social and economic disorganisation and malnutrition, the natives had little resistance. As a further act of divine retribution the Island was visited by a series of natural disasters in the 15 years after 1829. Severe hurricanes (followed by famines and food shortages) struck the Island in 1829, 1831, 1833, 1841 and 1846. The upshot of the first two decades of contact with European civilisation was the catastrophic population decline

mentioned earlier. By the end of the century the force of the earlier elements of population decline were still to be felt. Writing of the general state of the population in 1892 Andrews remarked:

"During my stay in Rarotonga there were six deaths in Avarua alone ... I saw many cases in various stages, the majority of them chronic types ... I think there is a greater number of people on the island suffering from consumption, taking into account its population and size, than I have ever seen anywhere else. To sum up, I consider the marked increase of the death rate of late years is owing to the introduction by Europeans of the tubercular virus, which has found a most favourable nidus in a people debilitated by syphilis and excessive venery, who are clean in their persons, though dirty in many of their habits (such as expectorating on the floor and walls of their houses), who have been given clothes but not taught how to use them. Tobacco-smoking is commenced at too early an age, and the practice of inhaling a large number of cigarettes every day by the women and young girls cannot but be detrimental to their health ... It is by no means an uncommon thing to hear men and women ... say that most of the evils wrought by civilisation are the work of the missionaries ... what I would venture to blame them for is the introduction of radical alterations in dress and mode of life." (NZPP A3 1894:20).

Moss also realised that the hasty adoption of European habits and customs had reaped its toll of the population. Writing in 1891 to the Government of New Zealand he remarked:

"... careful enquiry leads me to believe that early sexual excesses, the introduction of new diseases, the absence of healthy mental stimulus and the too sudden adoption of European dwellings, habits and clothing, are doing for more than intoxicating liquor to destroy the race. I would add to these the recent adoption of galvanised iron for roofing. The iron is used without lining, and often without any open space left between it and the low wall on which it rests. In their climate the houses thus become for the natives, ovens by day, and are correspondingly cold by night ..." (NZPP A3 1891:20-21).

A year later, however, there was a slightly more hopeful note in official correspondence ...

"The native population has decreased very much within the last half-century, but some hold that the tendency to decrease has stopped. At the best, the population is only stationary, and immigration very desirable. For this there is abundant room, and abundance of very fertile land now lying waste and useless ..." (Moss to Ranfurly, NZPP A3 1892:22).

Migration in the Nineteenth and early Twentieth Century

The movement of peoples has long been of importance in the Cook Islands. From as early as the 1840s and throughout the Nineteenth Century contemporary records make reference to the movement of people within the group and to other parts of the Pacific. The earliest reference to migration is in 1822, when Williams found "several natives at Aitutaki, from an adjacent island, called Rarotonga", (Williams, 1837:56). Planned and unplanned movements of population, especially from the 'low' atolls and southern volcanic Islands to Rarotonga as well as to labour centres outside the Group have been part of the Island scene for almost 140 years. In many instances the numbers involved have been considerable and within the context of small self-contained and very isolated Island communities the social and economic effects of such movements have been profound. Statistical estimates of migration extend back to the 1840s when outside contacts with the Island were growing and visiting whalers were beginning to recruit Island seamen in appreciable numbers. Buzacott records that by 1840 at least 60 whaling vessels were calling at Rarotonga annually and towards the end of the decade most missionaries made reference to the large numbers of young men leaving the Island, either as crew on the whalers or to work as plantation labour in Tahiti (See Pittman, 1847 SSL Oct. 28; and Gill 1847 SSL Dec. 20). Movement away from Rarotonga had probably begun a decade or so earlier but it is not until the period 1840-1860 that the numbers leaving the Island excited local concern. Contacts with Tahiti were established at least by the late 1830s and the next decade saw a healthy movement of labour to the French Island. Many young men took jobs on the plantations while others found employment as domestic help for the European residents. Mostly the movement was of a short-term nature, the sojourners returning after a period of some six to eight months (Gill, 1848 SSL June 17). For most

it was a desire for adventure and novelty, the challenge of new experiences and new ways of life, the wish to escape the hardships and frustrations of a restrictive missionary and traditional system as much as the simple lure of wage labour. The apparent sophistication and wealth of the repatriates seems to have acted as a stimulus for further emigration. By the middle of 1849 it was estimated that approximately 200 young men had left Rarotonga (Pittman, 1849 SSL July 3) and despite mission efforts to staunch the flow the level of emigrants remained high during the next decade. During 1853 85 youths are recorded as having left the Island of which only 29 ultimately returned (Buzacott, 1854 SSL Jan 12). Many of the returnees proved an unsettling influence on Island life and in the eyes of the missionaries were a "depraved and vicious element" advocating such sins as prostitution and the consumption of fermented liquors (Gill, 1846 SSL Nov. 30). Contacts with Tahiti remained strong during this period and in 1849 a party of young men came to Rarotonga and instructed the local inhabitants how to mix and ferment orange juice so as to make "orange rum". For some months, we are told "law and order were sharply contended" (Gill, 1871:52-53).

By the 1850s the whaling boom in the South Pacific was all but over and whereas upwards of 60 vessels had once called annually at Rarotonga, after 1850 the number was nearer 20 (Gill, 1876:61). The decline in whaling did little, however, to stem the flow of migrants and many young men continued to sign on as crew on visiting ships travelling as far afield as Tahiti, Honolulu, California and Sydney. By the late 1850s labour recruiters extended their activities to include Rarotonga and many labourers were indentured to work the guano deposits in eastern Polynesia as well as for plantation work in Tahiti. The extension of labour recruiting to include Rarotonga introduced a potent factor into the Island's demographic history. The enthusiasm with which the

Islanders embraced some form of labour contract was indeed remarkable and it is reported that young men who under normal circumstances cared little for leaving their village lands shared no hesitation to enlist for short-term contracts to work the guano Islands (Chalmers, 1870 SSL Dec. 19).

The Islander's enthusiasm to migrate was undoubtedly stimulated by their increasing contact with Europeans who after 1860 began to increase their numbers on the Island. Movement to these points of European contact introduced Islanders to a money economy, new forms of employment and to many new social concepts.

A movement of population to the Avarua district was evident as early as 1845 when the missionaries noticed the "drift of restless young people" from the Takitumu district (See Pittman, 1847 SSL Oct. 28). The next phase of internal migration was one from the Outer Islands to Rarotonga. This took place from all Islands but particularly from the larger southern Islands of Mangaia, Atiu and Aitutaki and by the last decade of the century had reached considerable proportions. In 1872 the Chiefs of Mangaia removed the prohibition on people leaving the Island and within four months of their lifting the ban 150 young men are recorded as leaving for Rarotonga (Harris, 1873 SSL Apr. 22). Within one year of the restrictions being lifted approximately 100 Mangaiaans were living on Rarotonga mostly in the Avarua area (Chalmers, 1872 SSL Dec. 23). By 1895 there were more than 500 'immigrants' on Rarotonga, the majority from the Islands of Mangaia, Atiu and Aitutaki.

For many migrants, however, migration to Rarotonga remained simply a preliminary step in a chain of migration that would be completed elsewhere. Many of the Islanders recruited on short-term labour contracts on Rarotonga in the period after 1870 were probably immigrants from one of the other Cook Islands. This would suggest that the immigrant population on Rarotonga was a mobile one and that permanent settlers were relatively few before 1900.

The migration of Islanders both within the Group and overseas continued throughout the last decades of the Nineteenth Century and into the first decade of the Twentieth. After 1860 and sporadically until 1927 the Melbourne firm of Grice, Summer and Company were employing Cook Island labour to work the guano deposits in the central equatorial Islands of Flint, Vostok, Caroline, Malden and Jarvis. Later in the century the British firm of Houlder Brothers was using Cook Island labour for plantation work on the same Islands. The close proximity of the Southern Line Islands to the Northern Atolls of the Cook Islands undoubtedly helps to explain the close links between the two groups during the Nineteenth and early Twentieth Centuries. Phosphate deposits were almost worked out on the Line Islands by 1895 and thereafter attention turned to the most western Phoenix Group. An American company was employing Islanders from Niue, Atiu and Mangaia in the late 1880s to work the phosphate deposits on Enderbury, Baker and Howland. As well as this, Islanders were still being recruited for plantation work in French Polynesia, Suwarrow, Christmas and Fanning Islands as well as for crew on visiting ships. In 1870 a local trader was given authority to recruit 60 Rarotongans for work on the phosphate deposits of Starbuck Island (See Arundel, 1872 SSL May 12). The growth of trading links between Auckland and Rarotonga after 1880 and the establishment of a regular shipping link in 1885 most probably encouraged the movement of some Islanders to the New Zealand mainland. Certainly there is evidence to suggest that Rarotongans were visiting New Zealand as crew on trading ships in the last three decades of the Nineteenth Century. It is also quite probable that some Cook Islanders were working in New Zealand prior to 1890. Andrews in his health report on the Rarotongan population in 1892 refers to a Rarotongan who had previously worked on a "station" in New Zealand and who had returned to the Island afflicted with hydatids (Andrews, NZPP A3 1894:18).

By the turn of the Twentieth Century the level of absentees had reached such proportions as to cause considerable concern among the local community and in 1900 efforts were made to limit the numbers of persons who could be enlisted for work outside the Group (see NZPP A3 1901:11). Despite these efforts, there were 149 absentees from Aitutaki alone "in ships or at the guano Island" in 1903 (N.Z. official Yearbook, 1903) and one year later there were estimated to be at least 400 Islanders living on Tahiti (NZPP A3 1904:74). The 1906 census records 196 absentees from the Islands, but apart from detailing the Island of birth makes no reference to their actual location or activity (N.Z. Census, 1907: Appendix C). Labour recruiting reached a peak in the first five years of the new century and by 1905 Islanders were labouring on the guano deposits at Malden, Christmas and Flint, the coconut plantations of Mopia and Suvarrow Islands, not to mention large numbers in the eastern French Islands of Tahiti and Makatea. The centralisation of recruiting activities on Rarotonga encouraged many outer Islanders to flock to the Island. In one week of June 1905 130 Aitutaki men and women arrived on the Island and probably remained for some months (Gudgeon to Mills, NZPP A3 June 5, 1905: 2-3). Most migrants were well satisfied with their term of indenture and often re-enlisted at the completion of their one year contract. In this they were often encouraged by the New Zealand administration who in the best traditions of the Protestant ethic preferred to see individual industriousness and personal gain rather than Islanders held in bondage by the traditional chiefly system (see particularly Gudgeon to Mills, NZPP A3 9 Aug. 1905:13). Labour recruiting continued into the early years of the First World War mainly to the central equatorial Islands of Malden, Enderbury, Christmas and Flint as well as to Makatea and at the same time the Union Steamship Company continued to employ Cook Islanders as deck crew on some of their vessels. The virtual cessation of shipping

services to the Island during the war years, however, brought about a complete decline in labour recruiting after 1915. The last Islanders to be recruited left Rarotonga for Malden and Makatea Islands in January 1914. Even by 1912, however, developments on Rarotonga had removed some of the necessity to seek employment outside the group and by 1915 the Resident Commissioner had cause to remark that, "each year there is tendency to increase wages on Rarotonga, and this together with the picture-house and other amusements, attracts the younger men from the other Islands" (NZPP A3 1915:6). The decline in labour recruiting after 1915, therefore, occasioned no fall in the number of immigrants to Rarotonga and by the 1920s their numbers had grown such so as to easily exceed the number of employment opportunities on the Island.

GROWTH OF POPULATION IN THE TWENTIETH CENTURY

Overall the total Cook Island's population has increased at a much slower rate than any other in the Polynesian region during the last few decades and this low growth rate has persisted despite the marked reduction in mortality rates and the unaltered high fertility pattern (see Table 1.1). Rarotonga, by contrast, has consistently maintained an annual rate of increase in excess of the national rate with the exception of the years 1936-51 when the two rates were roughly identical. The high Rarotongan growth rate is clearly attributable to the migration of Outer Islanders and other foreign-born to the Island as well as to high rates of natural increase after 1916. In more recent years and especially after 1961, emigration to areas outside Polynesia has acted to depress the Island's growth rate. In broad terms the course of population growth in the Twentieth Century falls logically into five periods:

1. 1902-1916

The 1902 population count on Rarotonga serves as something of a demographic watershed in the Island's history. By this date the indigenous population was near its lowest ebb, mortality rates were very high and consequently growth rates were very small.

TABLE 1.1

AVERAGE ANNUAL RATES OF INCREASE 1902 - 1966

(Percent Increase Per Year Over Period)

Place of Birth

	Total Rarotonga	Rarotonga	Other Southern	Northern Atolls	Other Polynesian	Metro- politan	European	Total Cook Islands
1902-06	4.62	1.038	12.14	-	-	5.05	-	-
1906-11	2.6	1.68	1.02	26.77	4.0	5.98	5.79	0.23
1911-16	2.21	0.128	7.95	-0.72	2.19	10.35	3.62	0.12
1916-21	2.8	4.013	1.08	-0.31	3.79	0.47	4.41	1.59
1921-26	2.48	3.82	2.16	8.39	-5.25	-1.01	-1.001	1.37
1926-36	2.84	3.617	1.14	3.6	1.66	0.48	1.37	2.00
1936-45	1.28	2.18	-0.678	1.97	-3.58	-1.13	-2.37	1.3
1945-51	1.42	0.49	5.24	1.34	-3.12	4.57	7.59	1.4
1951-56	3.84	2.272	8.48	7.39	3.4	3.41	0.48	2.12
1956-61	4.059	2.77	8.1	5.03	-1.69	6.94	4.9	2.03
1961-66	2.985	2.91	-0.75	14.13	-0.26	10.97	5.41	0.946

Source: Cook Islands Population Censuses 1902-66

Between 1902 and 1911 there were 845 deaths on Rarotonga and only 857 births and in three years the number of deaths actually exceeded the total number of births. Despite the fact that in these 10 years births only exceeded deaths by 12 the total population increased by 698 persons (Table 1.2). Between 1902 and 1906 although the total population grew by 381 persons at an average rate of 4.62 percent, native-born Rarotongans increased their numbers by only 63 or just over one percent per annum. Most of the Island's growth in this period, therefore, must have come from the in-migration of Outer Islanders, chiefly Manganians, Atiuans and Aitutakians. Table 1.2 shows that natural increase played a negative role in this four year period, (deaths actually exceeding births by two) and that the average annual migration rate for the Cook Island population was 72.02. Consequently, it is plausible to suggest that the increase of Rarotongans in this period was due to the return to the Island of Islanders previously working overseas. The following intercensal period saw a decline both in the population growth rate and in the average annual migration rate, even though the Rarotongan-born element increased their numbers by 133 at an average annual increase of 1.68 percent. Despite the arrival of 78 Islanders from the northern atolls of Penrhyn and Manihiki the average migrational intake fell to 54.4 due in large part to a marked reduction in the number of Islanders from the larger Southern Islands. Once again the level of deaths in the population was high and in these five years natural increase only accounted for 14. The 1911-16 intercensal increase was the smallest of the period and despite the fact that natural increase added 198 to the population the local-born element only increased its numbers by a mere 11 persons. The Island's rate of increase was maintained at a reasonably higher level by an influx of Manganians and Atiuans to the Island.

Population growth between 1902 and 1916 reflects the independent operation of labour indenture attracting Islanders to

TABLE 1.2

ESTIMATED NET MIGRATION (1)

	Births	Deaths	Natural Increase	Actual Increase	Net Migration	Average Annual Migration*
1902-06	380	382	-2	363	361	72.02
1907-11	477	463	14	286	272	54.4
1912-16	648	450	198	280	82	16.4
1917-21	635	399	236	403	167	33.4
1922-26	645	350	295	433	138	27.6
1927-36	1,658	744	914	1,093	179	17.9
1937-45	1,831	817	1,014	518	-496	-55.1
1946-51	1,394	816	578	398	-180	-30.0
1952-56	1,260	527	733	1,158	425	85.0
1957-61	1,760	319	1,441	1,402	-39	-7.8
1962-66	2,167	427	1,740	1,210	-530	-106.0

(1) Includes Native-born population only

* Provides only a rough estimate only of migration as excludes calculation of returned migrants

Source: Register of Births and Deaths Rarotonga 1902-66

Rarotonga as well as the continuance of the Nineteenth Century regime of high and fluctuating mortality rates. Growth in this period was due almost entirely to the immigration of Outer Islanders, the arrival of a small number of Europeans and other Polynesian groups together with a very small natural increase.

2. 1916-1936

The years between 1916 and 1921 are extremely significant ones in Rarotongan demographic history. After 1918, and for the first time in many years, the gap between births and deaths widened as mortality rates were forced down. Prior to 1916 crude death rates had been in the vicinity of 41-47 per thousand. By 1921 the crude death rate had plummeted to only 16.2 per thousand. Although 1921 appears very much as an exceptional year in that the level of deaths was the lowest in recorded history, the fact still remains that in five years a remarkable transformation had taken place. For the first time since European contact, natural increase began to play the dominant role in determining the course of population growth. In the first intercensal period after 1916 natural increase accounted for just over half of the total population increase of 433 persons. Between 1916 and 1936 the total Rarotongan population increased at an average annual rate of 2.7 percent, whereas the locally-born element grew at a rate of 3.81 percent. During these years immigration was considerably less of an influence in Rarotonga's growth than had previously been the case and between 1916 and 1936 the average annual migration rate was a low 26.3. Only Aitutakians, Maukeans and Manihikians showed consistent growth over these 20 years.

3. 1936-1951

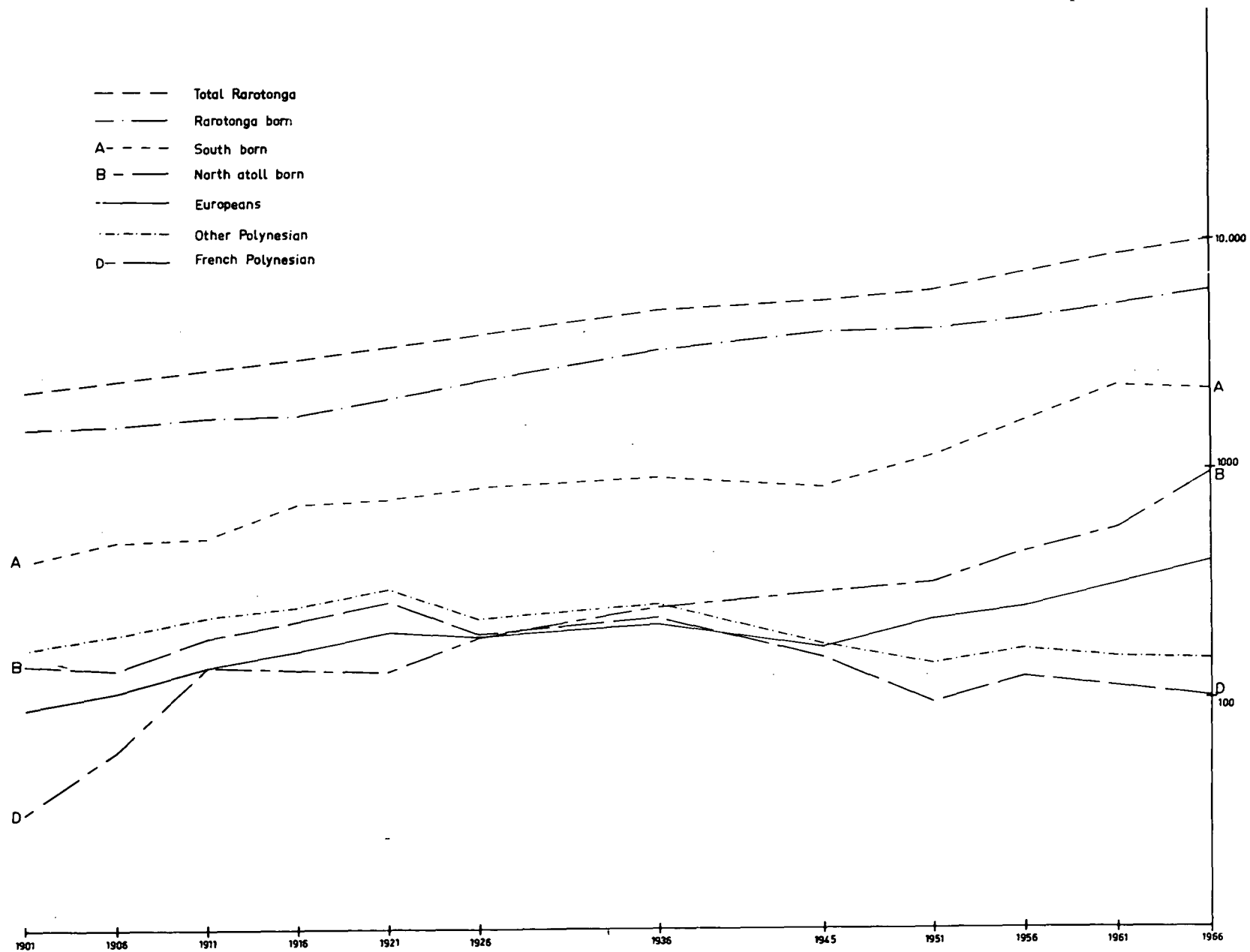
In the 15 years after 1936 the Rarotongan population experienced the lowest growth rates of the century. These 15 years saw a net migrational loss to the Island of some 676 people from the population (Table 1.2). Many of these emigrants were engaged

in the movement of labour to Makatea while others undoubtedly migrated to New Zealand. Between 1936 and 1945 there was an overall decline of Southern-born Islanders and other Polynesians (See Figure I.3) with a small increase of Islanders from the Northern Atolls. The 1930s and 1940s, years of depression and war, were years in which economic growth on the Island sank to a low ebb. Infrequent shipping, low fruit and copra prices and uncertain overseas markets caused a considerable decline in income levels. Towards the middle of this period many Islanders were being actively encouraged to accept labour contracts to Makatea.

4. 1951-1961

The ten years after 1951 are significant ones in Rarotonga's history not only because they saw the beginnings of large scale emigration to New Zealand but also because they mark the beginnings of modern social change on the Island. The population growth rate over these ten years averaged almost four percent per annum and was due in large extent to the influx of large numbers of Outer Islanders and the very high rates of natural increase. Islanders from the Southern Group increased at a rate double that of the total population and migrants from the Northern Atolls increased at a rate only slightly less. After 1956, however, as Table 1.2. shows, the actual intercensal increase of the Cook Island population was less than the natural increase indicating that there was a net migrational loss of 39 or 7.8 per year. Despite the changes brought about by migration the years after 1951 are important in that the gap between births and deaths increased very rapidly. The level of deaths in the population fell rapidly away until by 1961 the crude death rate stood at an extremely low 6.5 per thousand. Ten years earlier the figure had been 21 per thousand. In the same period the level of births went on increasing in the population. Between 1951 and 1961 births actually increased by 71.3 percent while deaths decreased by 56.2 percent.

Fig. I.3 Ethnic Composition Rarotonga 1901-1966.



5. 1961-66

The five years after 1961 are important for the very high level of emigration for the Island. Estimated net migration for this period was 530 at an average annual rate of 106. The period is also significant in that the numbers of Northern Atoll Islanders moving to Rarotonga increased almost fourfold over the previous intercensal period. At the same time there was an absolute decline of 87 in the numbers of Southern Group born on the Island, due almost entirely to a decline in the numbers of Manganians, indicating that members of this group mostly contributed to the movement to New Zealand. Births reached a peak level in 1964* and in the next two years declined slightly to a crude birth-rate of 46.6 per thousand in 1966. The level of deaths also increased after 1962 indicating a certain degree of aging in the Rarotongan population, as well as persistently high levels of infant mortality.

In summary, between effective European contacts and the present day, the Rarotongan population has experienced a number of periods of change. In the Nineteenth Century, introduced disease and natural disaster together with emigration and the general problems of culture contact combined to cause a rapid loss in total numbers, an upset in the age-sex structure of the population and a tradition of high and fluctuating mortality rates. These factors continued to be operative until the second decade of the Twentieth Century. Since this time there has been a sharp and dramatic reversal of population trends as Islanders have successfully accommodated to the initial shocks of culture contact. However, it is only in the last 10 years that population numbers have surpassed those of pre-European times and then only after a long period of decline, a slow recovery and with the addition of large

* There were 468 births in 1964 giving a crude birthrate of 48.2 per thousand (Register of Births 1964).

numbers of immigrant groups. By 1966 native Rarotongans still had not reached the level of the pre-European population. Although infant mortality rates remained high until the late 1950s, general mortality rates declined very rapidly after 1916. At the same time immigration from the other Cook Islands as well as from overseas has contributed considerably to modern population growth. Present rates of population growth falsify many of the predictions made earlier this century and in the long run must be attributed to advances in medical science and the preoccupation of the colonial administration with social services, education and health. Health conditions must be seen as likely to improve and consequently mortality rates, especially infant mortality rates, can be expected to decline and life expectancy increase. Given the present rate of increase of more than 3 percent since 1951 the same land area may be expected to support an additional 5,000 - 6,000 people in the next two decades. Migration to New Zealand may alleviate the problem to some extent but not completely. The problem, therefore, is how to mesh this rapidly increasing population with its increasing needs, to the limited resources and land area available. With this rapid growth of population and especially of the workforce, employment opportunities in primary and secondary industry have simply not expanded quickly enough to keep pace with the growth in numbers seeking a livelihood. Such a situation has come about at a time when the value system of the Rarotongan population is also undergoing change. Since 1951 most Islanders have expressed a growing desire to accumulate material goods, to work for a weekly wage as well as a definite preference for non-indigenous foodstuffs. Consequently, less and less subsistence food crops have been cultivated. More significantly, however, is the fact that much of the better land on the Island lies unused, paralysed by an intransigent land tenure system and the emigration of many titleholders to New Zealand.

TABLE 1.3
PERCENTAGE DISTRIBUTION OF COOK ISLAND POPULATION
1902-1966

	RAROTONGA	SOUTHERN GROUP(*)	NORTHERN ATOLLS	AVARUA
1902	25.1	50.8	24.1	NA
1906	28.7	50.1	21.2	NA
1911	31.9	48.6	19.5	NA
1916	34.8	46.1	19.1	NA
1921	37	44.7	18.3	NA
1926	39	43.5	42.3	NA
1936	41.3	42.3	16.4	17.9
1945	40	44.8	15.2	16
1951	40.1	44.2	15.7	16.95
1956	43.2	41.8	15	20
1961	47.2	37.2	15.6	21.8
1966	51.8	35.8	12.4	26.8

* Excludes Rarotonga

NA No Figures Available

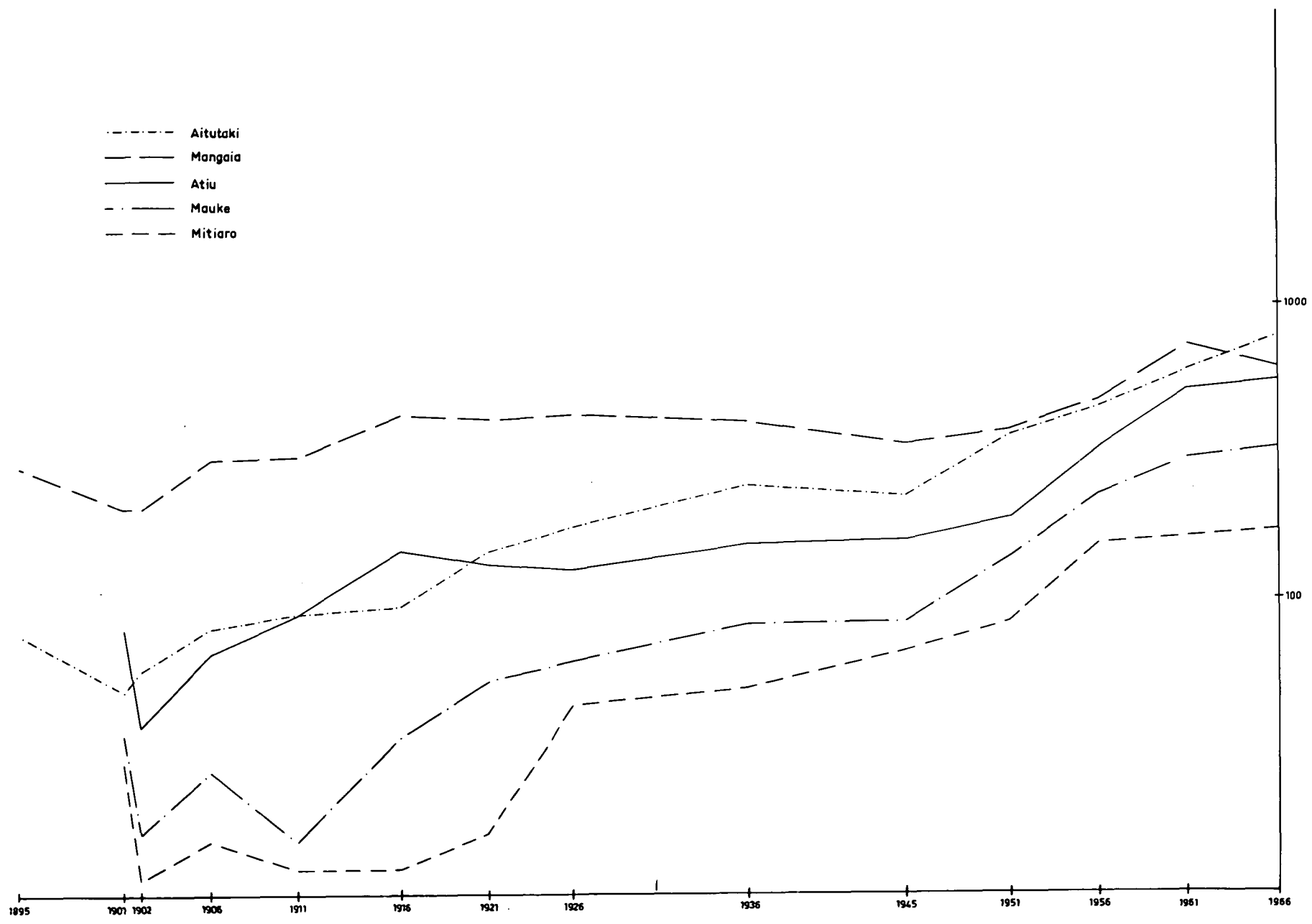
Source: Cook Island Population Censuses 1902-66

Migration and the changing ethnic composition of the population

Although migrants from the other Islands of the Cook Group were evident in the Rarotongan population as early as the mid Nineteenth Century and comprised approximately one-quarter of the total population by 1895 it is not until the Twentieth Century that internal migrants begin settling permanently on Rarotonga in significant numbers. The period between 1902 and 1966 is marked by the progressive redistribution of the Group's population from the Outer Islands to Rarotonga until by 1966 almost 52 percent of the Group's total lived on the major Southern Island (Table 1.3). The movement of people to Rarotonga has progressed systematically since the turn of the century although in a much more accelerated fashion since 1951. In a little over 60 years the proportion of the total population resident in the Northern Atolls has fallen from 24 percent to 12 percent while Rarotonga's share of the national population has more than doubled to 51.8 percent. The position of the other Islands in the Southern Group has also seen a considerable loss of migrants. By 1961 emigration to Rarotonga and overseas had reached such proportions as to have caused an absolute population decline on some Outer Islands.

The drift of population to Rarotonga and more particularly to the town of Avarua, is as mentioned above, of long standing duration. Although it mainly involved Islanders from the larger Southern Islands of the Group prior to 1900 (particularly Mangaian), migration was nonetheless of sizeable proportions. Migrants from the Northern Atolls do not figure prominently in Rarotonga's population until the second decade of the Twentieth Century and their numbers do not exceed 100 until 1911 at which time there were in excess of 800 Polynesian migrants on the Island (See Figures I.4 and I.5). After 1916 there was a lull in labour recruiting and emigration from the Group, a lull which coincided with economic depression and a marked decline in shipping services to Rarotonga. Between 1914 and 1918 there were very few shipping calls and after

Fig. I.4 Southern Migrant Groups on Rarotonga 1895-1966.



1918 the Island was served only by the USS Co. Ltd. mail boats which visited Rarotonga en route from New Zealand to the west coast of the United States of America. Not until 1936 did Rarotonga have a regular shipping service to New Zealand when the M.V. "Matua" began a monthly service.

In the first two decades of the century many Outer Islanders were moving to Rarotonga as a means of obtaining some sort of labour contract. The majority of these migrants looked upon their presence in Rarotonga as a short-term stop-over. Consequently, Rarotonga's migrant population was a continually changing one. Figures I.4 and I.5 illustrate the fluctuations in the numbers of immigrant Cook Island groups on Rarotonga between 1902 and 1936. The two censuses held in 1901 and 1902 reveal the short-term fluctuations that could occur. Between 1901 and 1902 the number of Islanders from Atiu, Mauke and Mitiaro fell by 79 while the number of Mangaianians remained exactly the same. Four years later, the three groups had increased by 43, and Mangaianians by almost 100. Presumably, if more detailed statistics were available they would reveal considerable variation in the yearly totals of each group.

As well as proving attractive for Islanders from the other parts of the Cook Islands, Rarotonga also attracted numbers of foreign-born migrants. Probably as early as the 1880s numbers of French Polynesians were moving to Rarotonga and by 1901 their numbers had reached 141. For the next 35 years this group was to form a significant element in the Rarotongan population. The fairly buoyant economic conditions that prevailed in Rarotonga in the late Nineteenth Century may have been instrumental in attracting large numbers of other Polynesians to the Island. Certainly by the turn of the Twentieth Century the Island must have ranked as one of the most prosperous in the Eastern Pacific and this alone may have been responsible for attracting large numbers from the neighboring French Islands.

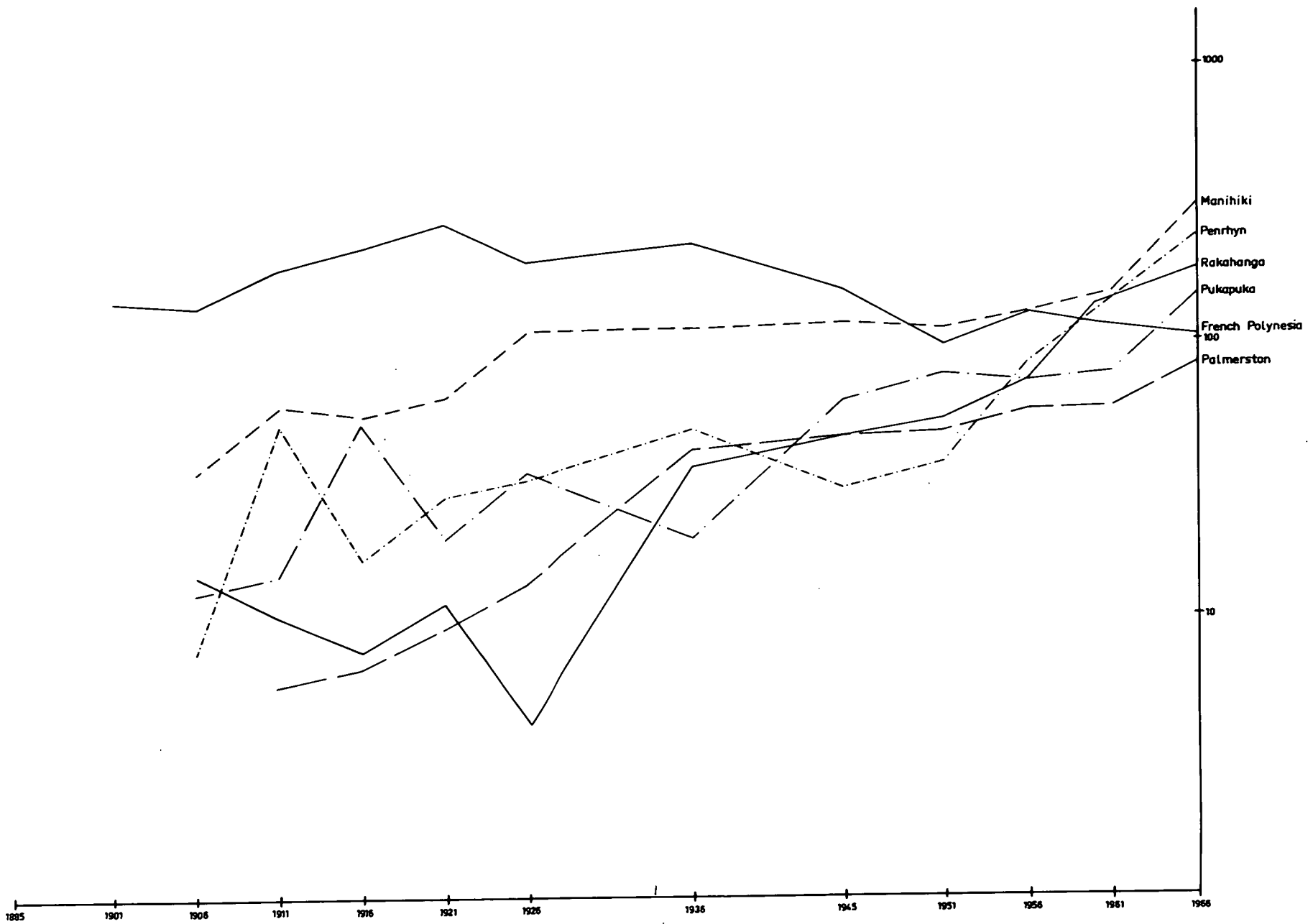


Fig. 1.5 Northern Migrant Groups on Rarotonga 1885-1966.

By 1916 Rarotonga's population stood at its most heterogeneous for the century. Native-born Rarotongans formed little more than half of the total population and in addition to large numbers of other Cook Islanders (mainly Manganians) and Europeans on the Island there were also Tahitians, Raiateans, Niueans, Samoans, Rotumans, Islanders from the Tuamotus, Marquesas, Papua-New Guinea, Honolulu and Huahine as well as representatives of many of the smaller South Pacific Islands. Five years later in 1921 the numbers of French Polynesians had reached their highest level (269) and at this date there were well over 100 Tahitians and 62 Raiateans in the population together with Islanders from Rurutu, Huahine, Porapora, Arorai, Rimatara and Moapiti (NZ Census 1921, Appendix B, 1923). French Polynesians remained a noticeable element in the population until as late as 1945 when there were still 151 Islanders resident on the Island. After this date their numbers declined as they intermarried with the local population until in 1966 there were barely 100 recorded in the population. The presence of such Islanders in the first 30 years of the century reflects among other things the long standing and very close relationship that existed between Rarotonga and parts of French Polynesia. Rarotongans were moving to the Society Islands throughout most of the Nineteenth Century for employment opportunities and undoubtedly many intermarried with the local populace. After 1885, the regular steamer service between Rarotonga, Tahiti, and New Zealand helped to further cement contacts between the two Islands. Many of these steamers refused to employ Tahitians on wharf/lightering work in Papeete and instead carried with them Rarotongans who performed these manual tasks and were subsequently returned and discharged at Rarotonga. This in its way would have heightened contacts between Rarotongans and French Polynesians on Tahiti and undoubtedly many Rarotongans returned bringing with them wives and relatives. The increased trading link with New Zealand also enabled Cook Island local produce to be marketed in New Zealand at preferential rates and the increased economic activity concomitant on this rise in transport

probably made Rarotonga an attractive place for migrants. The real reasons for migration probably, however, lie deeper. During the 1880s many of the eastern Islands of French Polynesia had much in common with Rarotonga. These Islands had always been strongly identified with the British and like parts of the Cook Islands had appealed frequently for British intervention and protection. In a part of the Pacific dominated by the French, Rarotonga remained the closest place with British ties. In addition to this, Islands such as Raiatea had very strong ties with the London Missionary Society. During the 1880s the French began a policy of persecution on Raiatea. Such a policy together with the replacement of the LMS by a French group and increasing pressure from the Catholic faith forced some Islanders to move to Rarotonga (Pers. Comm. R.G. Crocombe). Links with Raiatea, however, predated European intervention in this part of the Pacific. Raiatea was for many purposes the traditional and 'spiritual' homeland of Rarotongans.

Although no detailed figures are available before 1936, it would appear likely that most of these 'migrants' settled in the Avarua area. Certainly in that year of the 259 Other Polynesians on Rarotonga, 140 or 54 percent were resident in Avarua (Files Justice Dept. Rarotonga).

Changing Ethnic Composition 1951-1966

Since the end of World War Two and more particularly since 1951 there has been an increasing movement of Cook Island population mostly from the Outer Islands to Rarotonga and from Rarotonga and Aitutaki to New Zealand. Prior to 1951 many of the arrivals on Rarotonga were of a temporary nature but after this date significant changes took place. In the first instance the scale of the migration was new; in the second, long term absences were becoming increasingly important; thirdly, more wives and children were involved in the migratory process and finally, many migrants were involved in a migration process that would only be completed in New Zealand.

After 1951, therefore, more non-Rarotongans were settling permanently on the Island and between 1951 and 1966 their numbers increased by 115 percent at an average annual rate of 7.6 percent. These 15 years did not see a continued growth of Outer Islanders, however, and in the last intercensal period the Southern-born group actually declined by 0.75 percent. By 1966, only 60 percent of the residents on Rarotonga were locally-born, the rest being immigrants from the other Cook Islands or from overseas. Over the last 70 years the Rarotongan-born element in the population has fluctuated between 56 and 70 percent. Only twice has the figure exceeded 70 percent, in 1902 (73.7 percent) and again in 1945 (71.8 percent). In both these instances the previous intercensal period had seen a marked decline in the numbers of Southern migrants. The ethnic composition of the Rarotongan population is given in Table 1.4. In 1966 native-born Rarotongans comprised 6,010 people or 60.3 percent of the population. This figure, however, includes the locally-born children of Outer Island migrants and if these persons are subtracted from the Rarotongan figure then native Rarotongans would barely total 3,500. This figure, would however, still make Rarotongans the largest single ethnic group on the Island, although possibly outnumbered by all other groups combined. After Rarotongans, Islanders from Aitutaki, Mangaia and Atiu constitute the largest group with a population of 1,820 persons (18.23 percent of the total population). Following these groups were Islanders from Mauke (322 or 3.2 percent), and Mitiaro (168 or 1.69 percent). Migrants from the Northern Atolls numbered 942 or 9.45 percent of the population, the majority from the atolls of Manihiki and Penrhyn. Finally, Europeans with 399 persons made up an additional four percent of the population. The contribution of most non-indigenous groups to the total population has generally shown a slow but steady increase over the last half-century (see Table 1.4). The numbers of some groups, however, have fluctuated widely. Mangaiaans, for example,

TABLE 1.4
ETHNIC COMPOSITION OF RAROTONGA 1895-1966

(%)
 Birthplace

	Rarotonga	Aitutaki	Mangaia	Atiu	Mauke	Mitiara	Manuae	Palmerston	Pukapuka	Manihiki	Raka-hanga	Penrhyn	Tahiti	French Polynesia	European
1895	66.15	13.13	11.45		5.66										4.02
1901	68.4	2.22	9.33	3.62	1.58	1.26		0.04				1.4		6.38	4.12
1902	73.7	2.81	10.0	1.79	0.77	0.53									
1906	64.6	3.28	12.33	2.7	1.1	0.61		0.04	0.49	0.98	0.56	0.29		5.49	4.38
1911	62.65	3.27	11.13	3.22	0.55	0.4		0.18	0.509	2.14	0.4	1.81	3.12	6.74	5.04
1916	56.3	3.13	14.0	4.76	1.1	0.38		0.19	1.63	1.76	0.22	0.52	3.42	7.17	5.31
1921	59.1	4.11	11.73	3.73	1.51	0.46		0.25	0.54	1.79	0.31	0.76	3.96	7.67	5.68
1926	62.6	4.47	10.92	3.2	1.57	1.11		0.33	0.84	2.69	0.05	0.78	2.26	4.87	4.8
1936	66.45	4.82	7.95	2.07	1.64	0.98	0.06	0.78	0.37	2.11	0.69	0.95		4.47	4.25
1945	71.8	3.99	6.04	2.8	1.66	1.32	0.18	0.88	1.2	2.27	0.88	0.57	1.28	3.01	3.26
1951	68.48	5.96	6.21	3.09	2.26	1.38	0.13	0.77	1.25	1.81	0.85	0.59		1.6	4.06
1956	63.9	6.22	6.55	4.52	3.13	2.09	0.23	0.77	0.98	1.73	0.99	1.15		1.73	3.49
1961	60.4	6.83	8.36	5.87	3.42	1.84	0.3	0.65	0.87	1.69	1.51	1.57		1.29	3.61
1966	60.35	6.72	6.01	5.5	3.23	1.69	0.15	0.71	1.43	3.08	1.78	2.35		1.02	4.0

Note: Table Excludes "Other Pacific Islanders"

Source: Cook Island Population Censuses 1895-1966.

comprised only 9.3 percent of the total population in 1901, yet 15 years later their percentage share had increased to 14 percent only to thereafter progressively decline to a figure of 7.9 percent in 1936 and 6.01 percent thirty years later. The European component by contrast, has remained fairly steady over the last sixty years at approximately four percent.

The fluctuations in the numbers of immigrant and local groups which continued during the early Twentieth Century reflects the role of Rarotonga and particularly the town of Avarua as a "receiving area" and jumping-off point for migrants. Among the various Island groups present on Rarotonga, Manganians have always played a significant role in the Island's history. Always the dominant non-indigenous ethnic group until superseded by Aitutakians in 1966, Manganians were present in large numbers as early as the last two decades of the Nineteenth Century. On Rarotonga, their numbers have fluctuated widely reflecting the role Manganians have played on the Island (see Figure I.4). Manganians have always been among the most mobile sector of the Cook Island population and have moved about the Pacific in search of employment opportunities at least since the 1870s serving as labourers and domestics on Tahiti plantations, crew on ships, labourers on the guano Islands, general labourers and wharf workers on Rarotonga and later as emigrant-labourers to Makatea and New Zealand. Rarotonga until relatively recently was always looked upon by them as a half-way house, a temporary stopover in a chain of migration that would take them further afield.

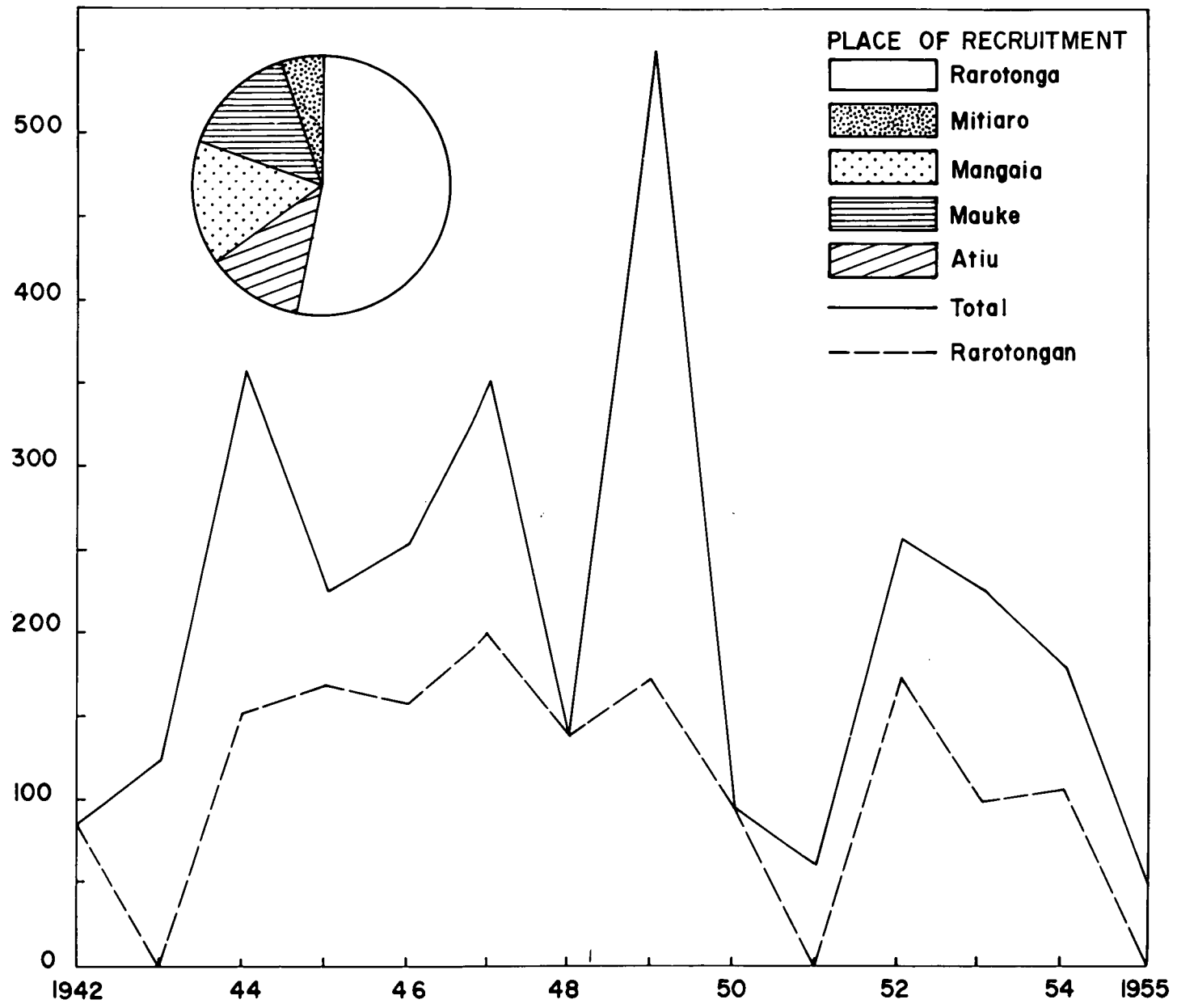
Labour Recruitment to Makatea 1942-1955

In 1942 the Compagnie Francaise des Phosphates de l'Océanie (CFPO) signed an agreement with the New Zealand Government to recruit young Cook Island labourers to work the guano deposits on Makatea in the Society Islands. Despite the long history of Cook Island labour indenture to this Island, the new agreement

proposed a level of absentees unknown to the Islands. Within 13 years some 2,906 Islanders had been recruited to work on Makatea of which 2,767 were ultimately repatriated (Files Customs and Justice Depts, Rarotonga). The agreement called for 18-30 year old males* recruited on one year contracts to work a five day 40 hour week at an hourly rate of 33.75 CFP (approximately 28 cents (NZ) an hour). Labouring was done with pick, shovel and wheelbarrow and workers could earn an output bonus on all in excess of three tons per day, dug and delivered. In addition, a contractual bonus of 238 CFP (\$2 NZ) was paid for every two weeks work. Lodging was provided at a small nominal cost (79 cents (NZ) per week), including free medical attention. Most employees were required to remit a certain proportion of their weekly wage to dependents in the Cook Islands or into savings accounts. Islanders were recruited at Rarotonga, Mangaia, Mauke, Atiu and Mitiaro and the first ship left Rarotonga three days after Christmas 1942 bound for Makatea with 85 Islanders. Thereafter a regular shuttle service ran between Makatea and the Southern Cook Islands until the 16th August, 1955 when the last group of Islanders were repatriated to Atiu and Rarotonga. At this date 91 Cook Islanders were still on Makatea (51 Mangaiaans, 40 from Mauke), 26 had died on the Island and an estimated 22 had been granted permission to remain in the Society Islands (Files Resident Commissioner, Collector of Customs and Registrar of Courts Rarotonga). Figure I.6 shows the number of Islanders recruited for each year after 1942. Just over half of all those indentured were recruited on the Island of Rarotonga although it is very likely that many of these were immigrants from the Outer Islands, especially the Northern Atolls which were not visited by the recruiting ships. 1949 marked the peak year of recruiting in the Islands when 556 Islanders were enlisted for Makatea. In the same year a total of 389 Islanders were repatriated.

* Some young females for domestic work were also recruited.

Fig. I.6 Makatea Labour Recruitment 1942-1955.

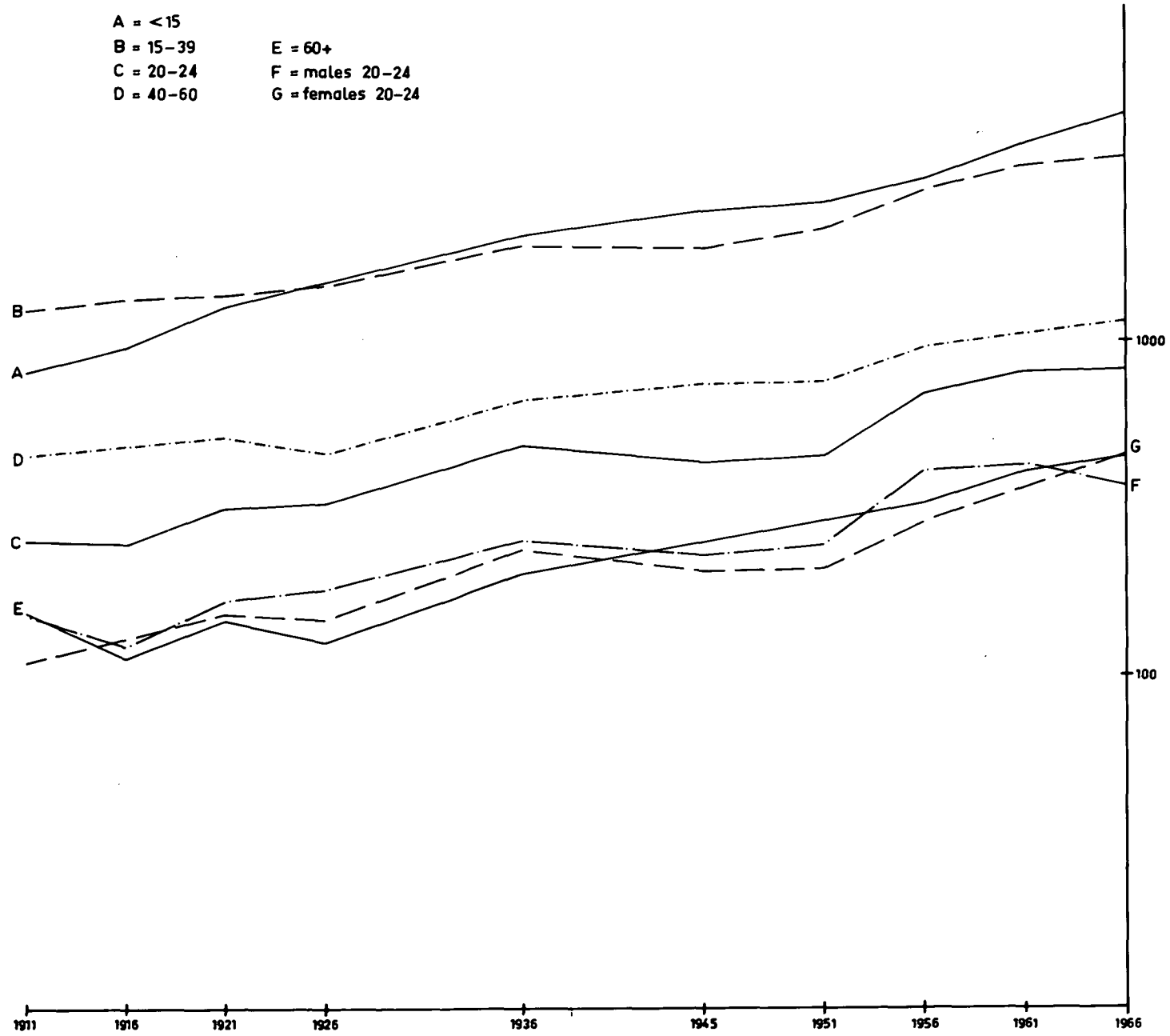


It is difficult to calculate from the available figures just how many Cook Islanders were absent in the Society Islands in any one year. The 1945 Cook Island census, however, records 207 males and 48 females as being absent on Makatea on census night 1945 (NZ Census 1945, vol. 2; 1949), while the census of French Polynesia in the following year records 357 Cook Islanders on Makatea (I.N.S.' E.E. 1950). If we take 207 young males as being the smallest number absent from the Cook Islands in any year between 1945 and 1951 and compare this number with the total number of males between 18 and 30 between 1945 and 1951 then approximately 20 percent of all such males were involved in the labour-indenture process. For some of the smaller Southern Islands the number of males absent at Makatea was even larger. In 1949, for example, of the 556 workers recruited for Makatea, 174 originated from Rarotonga, 142 from Mangaia, 102 from Mauke, 79 from Atiu and 59 from Mitiaro. It is very doubtful whether there were actually 556 Islanders absent at one time in 1949 as many renewed their contract as soon as they got home. Labour recruitment on the Island of Mitiaro between 1943 and 1953 illustrates very well the process that affected all Islands. In 1949 there were approximately 27 males on Mitiaro aged between 18 and 30 years of age. Of these, 20 enlisted for Makatea as soon as the opportunity became available and sailed for the Island aboard the M.V. Trienza on November 19th, 1943. Almost exactly one year later, 15 Islanders were returned to Mitiaro from Makatea and an additional 20 Islanders recruited (in this case the original 15 plus 5 newcomers). A year later 21 Mitiaroans were repatriated from Makatea. For the next eight years the same process continued, 26 Mitiaroans travelling back and forth to Makatea on one year contracts. At any particular point between 1943 and 1953 these 26 persons probably represented as much as 95 percent of the total male population aged between 18 and 30 years. Much the same pattern seems to have prevailed on the other Islands of the group especially Rarotonga where up until 1949 approximately 150 young men voyaged back and forth. At a time when employment opportunities

in the Cook Islands were very limited and wages extremely low on Rarotonga, labouring on Makatea proved very attractive for many Cook Islanders and many extended their labour contract for additional terms. In such a way did many Islanders accumulate the necessary fare to New Zealand. The minimum yearly wage (excluding the cost of lodging), for Cook Islanders working on Makatea in the period 1944-54 was in the region of \$592.32. Married men were required to remit two-thirds of this amount (\$394.88) to their families in the Cook Islands leaving \$197.44. Such a wage by Cook Island standards represented a small fortune. The recruitment of labourers for Makatea ceased in February 1955 and six months later the last Islanders were returned to the Southern Group. Two years later the CFPO attempted to re-negotiate a labour recruitment scheme with the New Zealand Government to work phosphate deposits in the New Hebrides but the move met with little success. Finally, in March 1964 Deputy-Mayor Bambridge of Papeete tried to interest the New Zealand and Cook Island governments in allowing Cook Islanders to be recruited for new harbour construction work in Papeete (On File Premiers Dept, Rarotonga). Bambridge's approach was, however, vigorously opposed by the New Zealand Federation of labour and a small but vocal minority in Rarotonga both of whom finally persuaded the New Zealand government to decline the offer.

Labour recruitment to New Zealand continued, however, and in the 1960s special schemes to recruit single males for rural agricultural work and female domestics for rural areas in New Zealand were introduced and by the end of 1961 a number of applications had been received (On File, Registrar of Courts, Rarotonga). Between September, 1969 and May of 1970 the Auckland firm Cambridge Clothing Company brought out 43 girls from Rarotonga on two year contracts to work in their clothing factory at Auckland. The company interviewed the girls in Rarotonga, paid their fare and arranged accommodation on arrival.

Fig. I.7 Age Structure Rarotonga 1911-1966.



CHANGES IN AGE AND SEX STRUCTURE

Figure I.7 shows the changes that have occurred since 1911 in the age structure of the Rarotongan population. In a little over 50 years the population has changed from one heavily weighted towards the adult age groups with relatively few children to one characterised by a very youthful population with almost half under 15 years of age. Compared with the 1911 population the 1966 situation shows a large surplus of people under the age of 15 years, and a noticeable deficit of adults over 20 years of age. Since 1911 the population has progressively become more youthful with a related decline in importance of the youthful adult age groups. Prior to 1916 the population reflected the role of the Island as a labour recruiting and attracting centre and was dominated by young migrants aged between 15 and 39 years. In 1916 a little in excess of 46 percent of the population fell into this age category whereas in 1966 the relevant percentage was 35.74 percent. The numbers of children aged under 15 years did not in fact exceed the numbers of young adults (15-39) until 1926 and for the next ten years the numbers of the two categories ran roughly parallel. After 1936, however, the numbers of children increased at a greater rate until 1951 when the gap narrowed slightly. Since 1961, with increased emigration removing large numbers from the youthful adult age groups, the gap has begun to widen again. Nonetheless, it was not until 1966 that the numbers of children in the population actually exceeded the number of adults and then only by a very small margin. The proportion aged under 15 years has therefore increased from 30 percent in 1911 to 48 percent 55 years later. Apart from the period 1951-1956 when this trend was momentarily interrupted by the large number of young adults (mainly males) migrating from the Outer Islands and returning from Makatea, the upward trend has been a continuous one. Increased immigration to the Island between 1951 and 1961 saw a rapid increase in the numbers of young adults (especially young people aged between 20 and 24 years) as well as

TABLE 1.5
CHANGES IN THE NUMBER OF ADULTS 1956-1966

	Males 15-59 Years			Total Population		
	1956	1961	1966	1956	1961	1966
Northern Atolls	641	736	493	1,255	1,385	945
Southern Group*	1,703	1,429	1,265	3,231	2,829	2,620
Rarotonga	2,080	2,314	2,437	3,784	4,370	4,719
Total	4,424	4,479	4,195	8,272	8,584	8,284

* Excludes Rarotonga

Source: Cook Islands Population Census, 1966, 1968

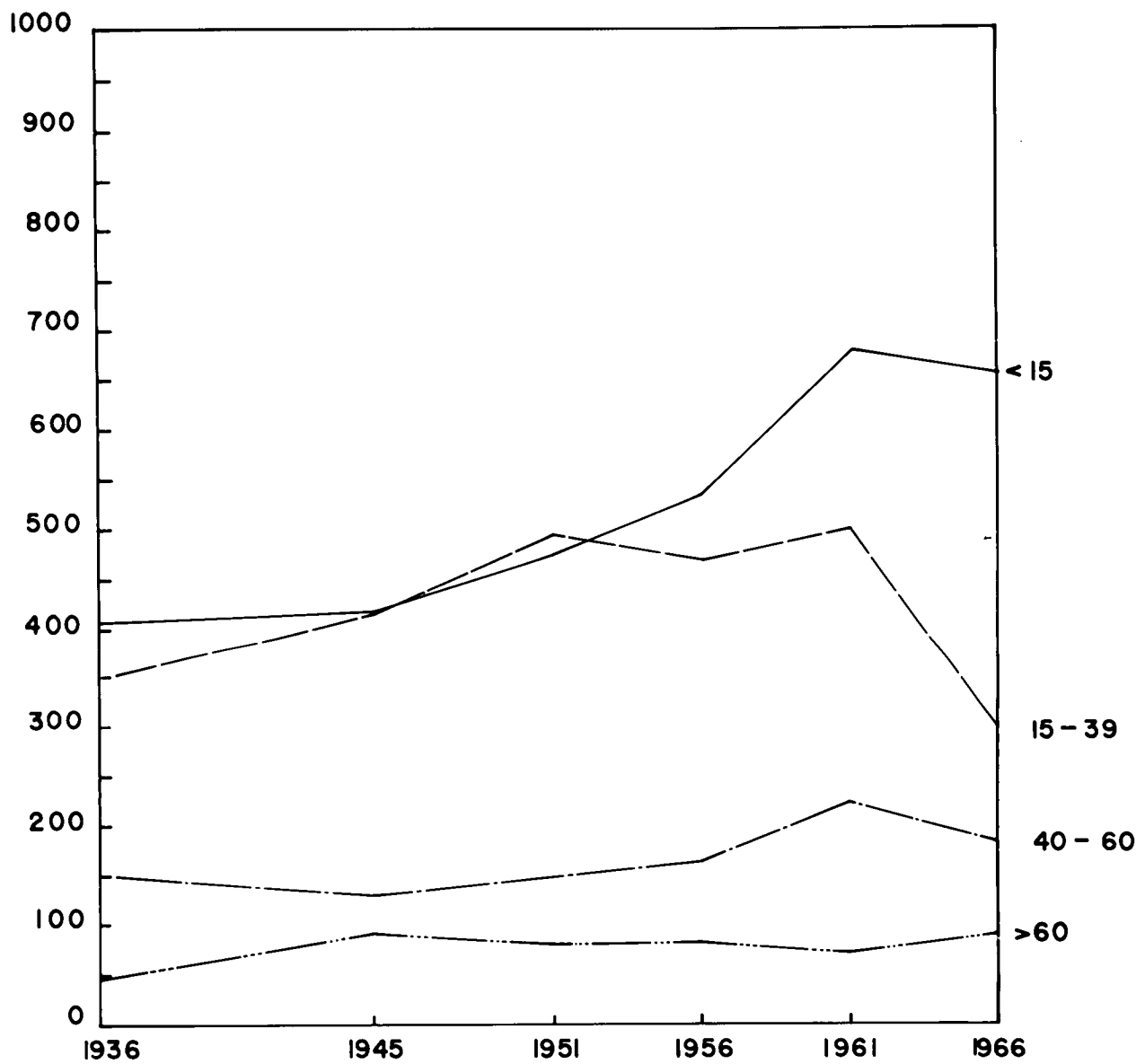


Fig. I.8 Age Structure Northern Atolls 1936-1966.

a growth in the numbers of people aged between 40 and 60 years. After 1961 emigration to New Zealand produced something of a decline in the numbers of young males aged 20-24 years, although females of the same age group continued to increase.

Changes in the Age-Sex Composition 1956-1966

Between 1956 and 1966 there were major structural changes in the Cook Island's population. For the Islands as a whole, the number of adult males aged between 15 and 59 years although substantially the same in 1961 as in 1956 declined significantly after 1961. By 1966 there were 284 or 6.34 percent less in these age groups than were recorded in 1961. This decline in adult males was even more significant in the Northern Atolls and the Southern Group*. Between 1961 and 1966, for example, the Northern Atolls lost 243 adult males or almost one-third of the numbers recorded in these age groups in 1961, whereas the Southern Group lost 611 persons after 1956 (Table 1.5). Table 1.6 shows this decline to be of particular importance for the more youthful adult age groups. For adults aged between 20 and 30 years the Northern Atolls experienced a loss of 123 males after 1956 (253 after 1961) and 70 females (54 after 1961) while the Southern Group lost 322 males and 137 females after 1956. In some cases the number of young adults present in 1966 represented only 50 percent of the numbers present five years earlier. The Northern Atolls fall into this category where of 422 young adults aged between 20 and 29 years in 1961 only 240 remained five years later. Rarotonga's population, by contrast, has experienced a growth in the number of young adults since 1956 even despite an absolute loss of 44 males from the 20-24 years age bracket.

Figure I.8 illustrates the impact of emigration on the population structure of the Northern Atolls. After 1961 there was a noticeable decline in numbers of males in all age categories except those aged over 60 years. The most marked decline, however, occurred in persons aged between 15 and 39 years many of whom had

* Excluding Rarotonga

TABLE 1.6

CHANGES IN YOUTHFUL AGE GROUPS, COOK ISLANDS, 1956-1966

	<u>20-24</u>						<u>25-29</u>						<u>30-34</u>						<u>35-39</u>					
	1956		1961		1966		1956		1961		1966		1956		1961		1966		1956		1961		1966	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Northern Group	100	114	112	109	65	55	115	100	100	101	54	66	71	69	110	84	64	78	91	50	81	73	71	64
Southern Group	245	240	210	239	128	203	226	206	172	170	202	180	192	164	108	131	178	165	178	165	162	161	149	150
Rarotonga	410	285	434	369	366	457	250	211	339	276	336	298	212	156	241	204	282	235	175	175	205	164	226	198
Total Cooks	755	639	753	717	559	715	591	517	605	547	534	534	485	405	542	451	454	444	444	390	447	398	446	412

Source: Cook Island Population Censuses 1956-1966.

moved to Rarotonga or New Zealand. For the Southern Group the decline in numbers of young adults occurred at an earlier stage. In the 10 years after 1956 these Islands suffered a total loss of almost 400 males through emigration. By contrast, to the former case, however, the numbers of young children did not decline but actually increased after 1956. Figure I.9 shows the changes in the number of young male adults for Rarotonga and the Outer Islands. The very rapid increase of young males on Rarotonga between 1951 and 1961 correlates closely with the decline of young men in the Outer Islands suggesting that many of these adults migrated to the main Island. After 1961, however, increased emigration to New Zealand saw a very rapid loss of numbers in the 20-24 year age group on Rarotonga as well as a slight fall in the numbers aged 25-29.

Since 1951, migration has been a selective process creaming off the young and the more active and ambitious from the population and transferring them to Rarotonga or New Zealand. Only in the case of labour recruiting was there any conscious effort to select persons in particular age and sex categories. The movement of young people within the Group and overseas has had a profound effect on the population structure of the home Islands. Figure I.10 shows the extent to which each male age group on Rarotonga and the Northern Atolls contained more or less than its pro rata share of those of corresponding age in the total Cook Islands population in 1966. The high proportion of young working age adults in Rarotonga in 1966 is clearly evident and the corresponding deficiency in the Northern Atoll population is equally clear.

Rarotonga 1945-1966

Since 1945 and particularly in the last decade the population of Rarotonga has also experienced important structural changes in its demographic composition. While the total population increased from 5,573 to just under 10,000 the proportion of children in the population increased from 45 to 48 percent. Despite this increase the proportion aged under 15 years is still considerably

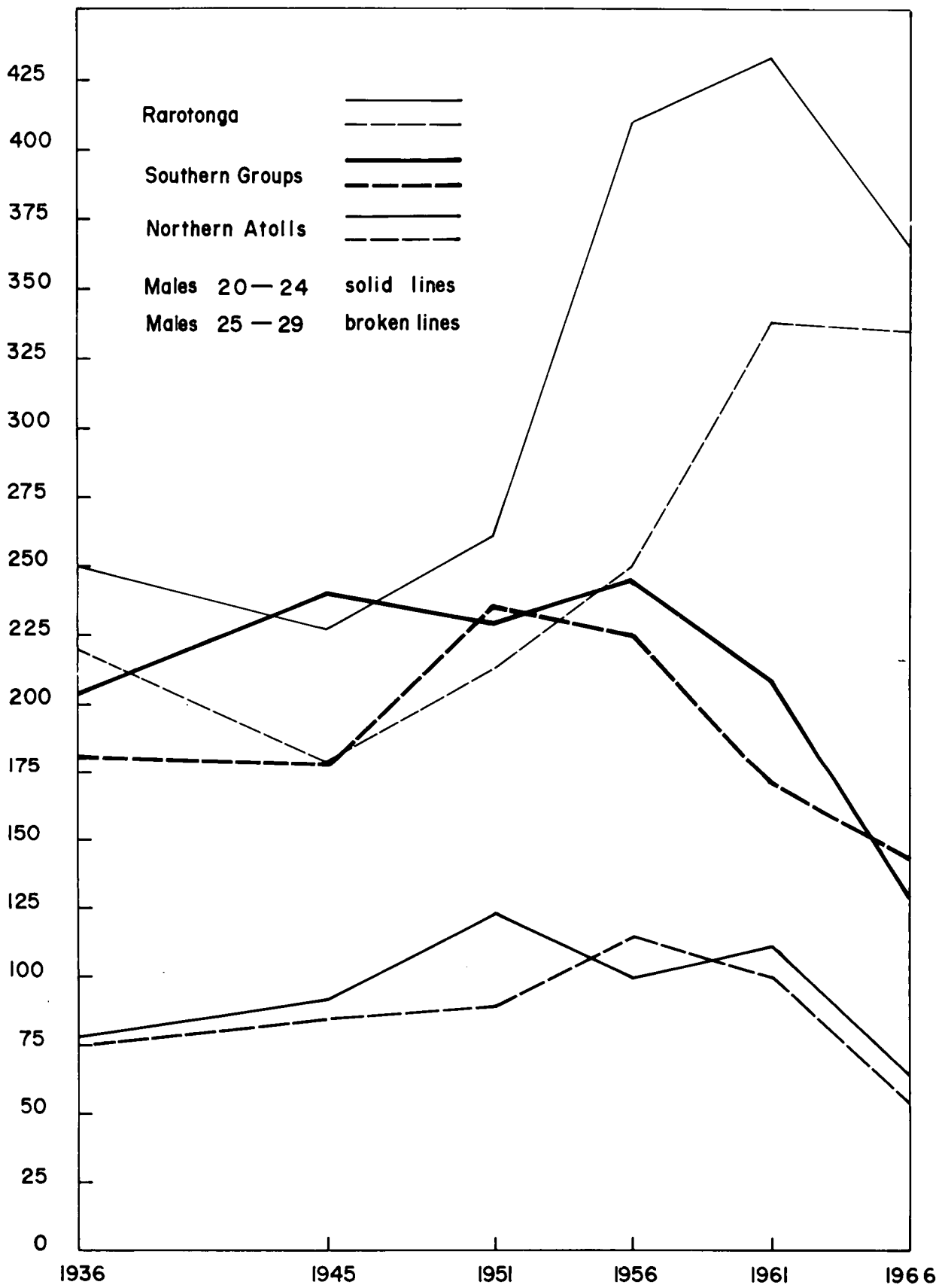


Fig. I.9 Age Structure Rarotonga and Outer Islands 1936-1966.

less in Rarotonga than is the case in many of the Outer Islands and for the total Cook Islands population (see Allen, 1969:33). At the same time the proportion of working age adults aged 15-59 years has fluctuated around the 47 percent mark, reaching a peak of 52.45 percent in 1956 and thereafter declining. Rarotonga's male population shows very well the fluctuations brought about by selective migration during the last 21 years. This is well illustrated in Table 1.7 which details the number of males and females in each age class per 1,000 persons enumerated at all ages between 1936 and 1966. Changes in the figure for males aged 20-24 over these years illustrate the effects of migration. Their numbers were down in the period 1945-51 (Makatea labour recruitment), considerably higher in 1956 (repatriation from Makatea), high in 1961 and down again by 1966 (emigration to New Zealand). The same applies to females in the same age groups over these years. This Table read in conjunction with Table 1.6 reveals that in periods when the Outer Island population increased on Rarotonga such as in 1951-56 the index figure for young working-age males increased significantly (for example, in 1951 the index figure for males aged between 20 and 24 years was 85.2. Five years later it had increased to 113).

The age group 0-4 years has contributed considerably more to the Rarotongan population since 1956 although this has largely been offset by a reduction in the proportions aged 20-29 years. Between 1961 and 1966 Rarotonga suffered an absolute decline of 68 males aged 20-24 as well as a decline of three males in the 25-29 age bracket. On the other hand, females in these two age groups increased by 88 and 22 respectively. Consequently, whereas males aged between 20 and 40 years of age decreased by nine in the latest intercensal period, females in the same age group actually increased by 175. Between 1956 and 1966 females accounted for almost 55 percent of Rarotonga's population increase so that in these ten years females contributed 275 more to the intercensal increase than did males. Evidence will be produced at a later

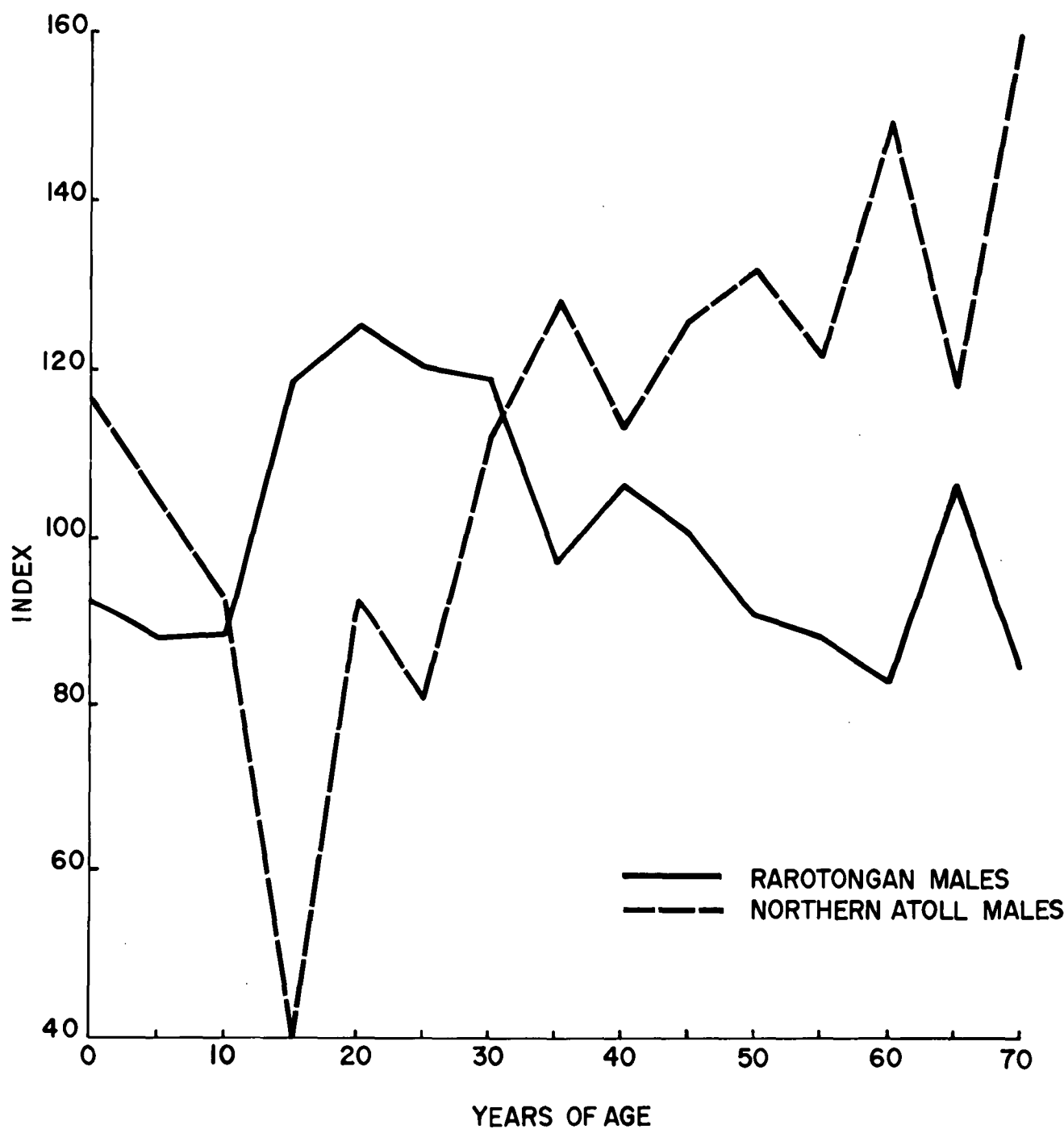


Fig. I.10 Age Structure Rarotonga and Northern Atolls 1966.

TABLE 1.7
NUMBER OF MALES AND FEMALES IN EACH GROUP PER 1,000
ENUMERATED AT ALL AGES. RAROTONGA 1936-66

Age Group	MALES						FEMALES					
	1936	1945	1951	1956	1961	1966	1936	1945	1951	1956	1961	1966
0- 4	164	155.2	164.4	158	184	197.4	161	161	161	193	193	192.5
5- 9	143	166	135.6	147	137.2	158	136	152	145	139	141	167
10-14	127	145.4	164.6	122.6	128	121	107	132	135	106	116	127
15-19	96.2	100.2	125.2	147.7	123.2	120	106	101	107	119	125	113
20-24	106	85.4	85.2	113	100	73.4	100	77.2	72.6	79	85	91.6
25-29	93	67	72	69.4	78.2	67.4	71.6	71.6	60.2	58.6	63.6	59.8
30-34	62.2	63	52.6	58.8	45.6	56.6	55.5	45.8	59.6	43.2	47	47.8
35-39	61	49	52.4	48.4	47.2	45.4	55	44.2	46.2	48.4	38	39.7
40-44	41	41.8	52.2	49.6	41	42	41.6	6.2	34.7	42.4	37	34
45-49	55.4	43	31.2	36.8	38.6	34.3	25.6	39.6	34.4	29.6	31.3	28
50-54	41	34.2	33.6	29.8	28	29	28.4	32.8	30.5	28.2	36.7	27
55-59	20.3	33	25	22.4	21.4	20.6	17	19.2	15.8	23.3	19.8	17
60-64	18.2	26.4	24.2	17.4	18.6	15.2	16	21.4	21.4	18	17	12
65-69	9.3	9	12.2	15.8	13.6	17.5	11	9	10.8	15	10	15
70+	16.1	14.3	14.4	17.2	15.7	14.6	13.5	15.5	19	13.3	17.5	16

Source: Cook Island Population Censuses 1936-1966.

stage to show that the increase of young females on Rarotonga after 1956 was due to a splitting-up of families by the emigration process and that many young females had moved from the Outer Islands to Rarotonga as the first step in joining a husband or parent already in New Zealand.

Changes in the Sex-ratio

An excess of males over females has been a distinguishing feature of the Rarotongan population ever since 1840 when Buzacott's census of Avarua recorded a sex ratio of 68.55 females per 100 males (Buzacott to Ellis, 1840 SSL July 1). Right throughout the Nineteenth Century there remained a large surplus of males in the population especially among the unmarried sector. Such a discrepancy was evident at the time of the first official census in 1895 when a sex ratio of 81.9 was recorded (NZPP A3 1896:3). After 1921 the imbalance between the two sexes began slowly to readjust itself as many males migrated overseas until by 1966 the ratio had increased to 97.55. After 1956 there was a considerable influx of female migrants to Rarotonga from the Outer Islands and this together with the removal of many young males to New Zealand pushed the ratio up.

The reasons for the large number of males in the population prior to 1951 are difficult to assign with any certainty especially for the pre-1870 period. After this date, the large number of young males moving to Rarotonga for social and economic reasons helps to explain the surplus of this group in the population. As McArthur points out (McArthur, 1967:175) the role of migration in the early history of Rarotonga is decidedly unclear. Certainly by the mid-1840s young men were leaving the Island and such emigration undoubtedly continued throughout the Nineteenth Century. Yet at all times there remained a surplus of males in the population. Possibly mortality was heavier among young girls than for other groups although it is very difficult to understand why this should have been the case.

The Impact of Migration 1951-1966

In the 15 years after 1951 the Rarotongan population increased by 3,923 or 65 percent at an average annual rate of increase of just over four percent. During the same period the Island experienced an immigration of 1,692 Outer Islanders as well as 355 Metropolitan born leaving a total of 1,876 for natural increase. In actual fact, natural increase between 1951 and 1966 totalled 3,914 indicating that the Island suffered a net loss of 2,038 in these years. If these persons were added to the population increase between 1951 and 1966 then the increase would be of the order of 5,961 or 98.57 percent at an average annual increase of 6.57 percent. The consequences of such a movement in demographic terms have been touched on above. In socioeconomic terms, however, migration has had a profound impact both on the point of origin and on the destination area. Undoubtedly, New Zealand has gained from the Cook Islands a sizeable unskilled labour-force at relatively little cost at a time when such labour was in considerable demand on the metropolitan labour market. The consequences of migration for some of the more remote Cook Islands, however, have been very serious. Migration, as mentioned above, is both an age and sex selective process mainly involving the young, better educated and more energetic sectors of the population. Consequently, there has been a siphoning off of the more productive sector of the population, both in terms of manual skills and education levels. In many cases this has meant that the age structure of many of the Outer Islands has become unbalanced with a disproportionate share of old and very young people in the population. In this situation the economic health of the community has suffered greatly; less land is cultivated - partly because there are few energetic young males left to work it - and partly because many of the people who have emigrated still retain their rights to a piece of land.

ECONOMIC CHANGES

During the last twenty years there have been rapid changes in the political, cultural and socio-economic life of Rarotonga as an expanding population, migration, growing urbanization and the

growth of market exchange transactions have combined to exert a pervasive influence on Island life. Twenty years ago approximately 80 percent of the male working population found employment in some branch of agriculture and apart from a handful of servicing and repair functions, the Island could boast no industrial development save a small handicraft industry. By 1966 not only were there far fewer persons engaged in agriculture but the wheel had turned full circle and agriculture was no longer held to be a highly valued activity. In these years, and especially in the period after 1961 there was a steady shift away from subsistence and cash cropping towards an increased dependence upon a wage economy. In many ways the process had begun years earlier when the experience of infrequent shipping, insecure markets and consequent wastage brought people to associate cash cropping with notions of risk and insecurity. More importantly, the profits to be made from agriculture suffered in comparison with those from a steady administrative job or a labouring job on the waterfront or in one of the few factories. A contributory factor has been the changing value system of the Rarotongan community and the growing desire to accumulate material goods. Motor cycles, transistor radios or a trip to Tahiti have all become much more important than growing food crops. Because of the demands imposed by a money economy, employment patterns are changing in such a way that both parents in some families are now working.

Between 1945 and 1966 there was an absolute decline of 1,282 persons or 42 percent in the number of males engaged in primary production. By 1966 barely two-fifths of all working males were found in this sector of the economy. This large decline is entirely a product of the last five years as between 1945 and 1961 the number of males in primary production actually increased by 10 percent. After 1961, however, there was a very rapid fall in the number so engaged and by 1966 barely half of the 1961 figure found employment in agriculture and related industries (See Appendix B).

Since 1945 there has been a related growth of males and females in the industrial sector of the economy. In absolute terms the number of males so employed increased from 68 in 1945 to 573 some 21 years later. Most of this growth occurred in the 1961-1966 intercensal period. For females in industrial occupations, however, the years 1945-61 gave an increase of the order of 114 percent whereas the 1961-66 intercensal period gave an absolute decline of six percent. Increases in the tertiary sector of the economy since 1945 have been even higher than those given above. Table 1.8 records these changes. Males engaged in the administrative/professional sector of the economy increased by 239 percent and there were changes in most other categories. The number of females employed in the domestic/personal service category did, however, suffer a considerable decline after 1961 when their numbers fell by 206 or 63.7 percent. What these figures indicate, is that in the last five years there has been a significant shift of emphasis away from the primary sector of the economy. To a certain extent this has been accompanied by a broadening of the economic base of the Islands and as such has largely been confined to Rarotonga. In 1961 approximately 68 percent of all males on Rarotonga were employed in primary production whereas five years later the proportion had dropped to only 27.8 percent. At the same time there was a large growth of numbers employed in both the secondary and tertiary sectors of the economy. Males involved in industrial occupations increased more than fourfold while the tertiary sector experienced a 62 percent increase. Thus it would appear that after 1961 there was considerable progress in broadening the Rarotongan economic base. It must be mentioned, here, that the above figures and tables are calculated on the basis of a person's main source of cash income. Subsistence agriculturalists on Rarotonga have always had a much greater opportunity of obtaining casual or part-time wage employment. This desire for both temporary and permanent wage employment probably

TABLE 1.8

INDUSTRY - PERSONS AGED 15 YEARS AND OVER

	Rarotonga						Cook Islands					
	1956		1961		1966		1956		1961		1966	
	M	F	M	F	M	F	M	F	M	F	M	F
Primary Production	1,555	15	1,550	3	632	105	3,769	24	3,362	13	1,766	397
Industrial	100	97	120	312	493	280	125	98	148	321	573	303
Transport and Communications	135	2	141	1	356	13	184	2	187	1	458	14
Commerce and Finance	99	40	122	64	194	144	172	52	206	85	241	175
Public Administration/Professional	232	122	342	237	497	295	457	179	617	329	764	424
Domestic and Personal Service	12	100	9	295	28	104	20	135	12	323	31	117
Others	5	-	5	-	78	10	8	-	5	-	125	38
Total	2,133	376	2,289	912	2,278	915	4,645	490	4,537	1,072	3,958	1,468

Source: Cook Islands Population Census 1966.

appears much earlier than 1945 on Rarotonga and certainly by 1945, the proportion of persons in the Cook Islands supplementing planting or food cropping with a subsidiary wage income was quite high. In this year 357 males or almost 10 percent of the total male labour force had an additional job, either part or full-time, to planting (NZ Census 1945, 1949: vol.2). Most of these were on the Island of Rarotonga and found employment as administrative clerks, small tradesmen or as general labourers. Often gardening and/or fishing activities were relegated to evening or weekend work. By contrast to wage employment, agriculture has come to be valued lower in terms of income and desirability and has consequently been relegated to a part-time activity or a last resort to fall back upon. It is very difficult to estimate just what proportion of the male population on Rarotonga in 1966 engaged in planting in addition to some other activity. The census records a total of 321 persons on Rarotonga as being engaged in a secondary occupation, the majority combining gardening/fishing with some industrial or tertiary occupation. Yet this figure only refers to those deriving a "large" cash income from their planting or gardening and would not include the large number who planted a few cash crops on a haphazard basis or who labour on a friend or relative's plantation when personal economy or a kinship obligation demands it. Nor would it include the number who combine a wage or salary job with part-time food cropping so as to supplement the household's food supply. Unpublished information from the 1966 census records a total of 616 persons in the Avarua district alone as cultivating cash crops and/or subsistence crops and of this total, only 106 were engaged on a full-time basis the remainder being part-time or casual cultivators (Cook Islands Census, 1966:Unpublished Table).

A noticeable trend since 1956 has been a reduction in the numbers of working-age males in the total population. Between 1956 and 1966 the total male work force declined by 687 persons (597

between 1961-66). On Rarotonga, the male labour force increased by 156 between 1956 and 1961 reflecting increasing migration from the Outer Islands, and remained almost at the same level between 1961-66. Whereas the number of males employed on Rarotonga has declined noticeably over the last ten years, the number of females in the labour force increased by 575. In 1945 the labour force participation rate* was 97 percent for males and 17 percent for females. By 1966 the rate for males had declined to 84 percent and that for females had increased to 34 percent. On Rarotonga, the comparable rates for 1945 were 81.5 percent and 20.1 percent for males and females respectively which by 1966 had changed to 70.5 percent for males and 42 percent for females. Although there probably was increased participation by women in the labour force after 1956 some of the rise in female employment would be due to changes in the census schedules, thereby including females as employed who had not previously been so designated. In addition, to this, there is evidence to suggest that some females engaged in subsistence and cash cropping after the males of the family had migrated to New Zealand.

The Public Sector as Employer

One of the important characteristics of the Cook Island economy is the high proportion of persons employed in the Government sector. The bulk of government employees are concerned with the administration of the social welfare services of the Island. The Administration provides employment as well as regularly injecting income into the Island's economy. As the centre of the administration for the Group, Rarotonga has a much higher proportion of the work force employed by the Government than is the case for the other Islands in the Group. In 1966 more than 1,000 persons were employed by the Cook Island's Administration on Rarotonga representing approximately 32

* The proportion of the population actively engaged in the economy.

percent of those actively engaged (On file, Premier's Dept., Rarotonga). Not all these however, were permanent employees as the Administration employed large numbers of casual workers in the Public Works Department. On the 1st of April, 1965, of 428 employed by the above department, 392 or 91.5 percent were 'Regulation' 66 workers' or casual employees. At present the bulk of Administration employees are concerned with administering the educational and health services of the Island. This top heavy tertiary sector of the Island's economy is not necessarily related to the productivity of the Island as it is basically dependent upon the large annual subsidy from New Zealand. The high proportion of Administration employees to the total labour force of the Island is not without its repercussions on the economic and social life. The level of wages of the permanent Government staff is significantly higher than those associated with the private sector. Within recent years the level of Administration salaries have increased considerably. At the beginning of 1958 there were 667 locally-appointed staff in the Cook Islands 80 percent of whom received an annual income of \$600 or less (On file, Premier's Dept., Rarotonga). By April, 1968 there were 944 local appointees of which only five percent received an annual salary of less than \$600 (On file, Premier's Dept., Rarotonga). The maximum earning potential of Cook Islanders is however, severely hampered by the necessity to have achieved particular academic qualifications. In 1965 a maximum salary of \$355 was imposed on those without a pass in the Government Qualifying Exam and a maximum salary of \$930 was all that clerical officers with a New Zealand School Certificate could ever hope to achieve.

Employment in 1966

Table 1.9 gives a detailed breakdown of the main industry groups at the time of the 1966 census. Of the 704 persons engaged in agriculture and fishing on Rarotonga, half found employment in the citrus industry or by growing root crops (mainly taro, kumara and arrowroot) and/or vegetables, while a further 16 percent

gained a livelihood from tomato plantings. Although agriculture directly involved a large number of individuals the industry also gave employment to a large number of subsidiary personnel. Table 1.10 illustrates this point. While 251 recorded their occupation as orchardist or fruit grower, an additional 355 persons had occupations as general farm hands and/or unskilled packers and graders. Manufacturing, concentrated exclusively on Rarotonga, employed 547 persons in 1966 the majority of whom worked in one of the two clothing factories which employed 248 women in 1966. Apart from this, the Island Foods factory in Avarua provided employment for between 118-200 workers. Two small handicrafts factories producing wood carvings and pearl shell jewellery for the New Zealand market together with the more normal consumer repair and maintenance facilities provide the only other industrial concerns on the Island. Employment in government and personal services, however, provide the largest labour employing force and in 1966 employed 872 people. Table 1.10 gives a breakdown of the major industry groups by occupational status. Although the census figures are not very explicit on the point one can see from the Table the very large number of persons in the unskilled labouring sector of the economy. In 1966 a total of 1,181 workers or 36.6 percent of total labour force fell into this category*. In many ways the employment situation on Rarotonga is remarkably fluid, the amount of temporary or casual unskilled labour being very high. For example, the Union Steamship Company maintains a permanent staff of 39 employees but requires an additional 150-180 casual labourers for work on the wharf and lighters everytime a vessel is loading or discharging at Rarotonga. The double handling of all cargo on such vessels, from wharf to lighter and from lighter to ship, requires a large labour force. Likewise the Island Foods factory may employ up to 150 workers often in two shifts if the pressure of work so

* Calculated from occupational tables, 1966 Cook Islands Census.

INDUSTRY GROUPS 1966 CENSUS. RAROTONGA

<u>Agriculture/Fishing</u>	704
Citrus Planting	182
Tomato Planting	113
Pineapple Planting	11
Root Crops/Vegetables	170
Coconut Planting	12
Other	205
<u>Manufacturing</u>	547
Fruit Juice Company	248
Wearing Apparel	248
Wood Carving/Jewellery	20
<u>Transport</u>	317
Loading & Discharging Vessels	138
Shopping Services	91
Other	88
<u>Services</u>	872
Education	240
Hospital & Medical	175
General Administrative	174
Private Domestic	89
Other	194
<u>Commerce</u>	338
Department & General Stores	320
Other	194
<u>Construction</u>	226
Building Construction	95
<u>Other</u>	225
<u>Total</u>	3,229

Source: Cook Islands Population Census 1966, 1968.

SELECTED OCCUPATIONAL CATEGORIES OF MAJOR INDUSTRIAL GROUPSRAROTONGA, 1966*

<u>Agriculture</u>	668
Orchardist/Fruit Grower	251
Copra Producer	5
Orchard Hand	33
Packer/Grader	47
General Farm Worker	275
Other	57
<u>Craftsmen/Labourers</u>	1,186
Dressmaker/Tailor	39
Clothing Factory Hand	51
Clothing Machinist	130
Semi-skilled Tradesman	163
Waterside Worker	131
Stevedore, Wharfinger	17
Builder's Labourer	29
General Labourer	271
Other Labourer/Production Worker	483
Other	307
<u>Clerical</u>	246
Clerk Public Service	171
Typist	44
Other	31
<u>Sales Workers</u>	179
Shop Assistant	149
Other	30
<u>Professional/Technical</u>	459
School Teacher	205
Medical Workers	111
Other	143
<u>Service Workers</u>	216
Domestics	106
Police/Customs etc.	53
Other	57
<u>Workers Seeking Employment</u>	116
<u>Total</u>	3,309

* Table excludes Transport and Communications, Administrative and Quarrymen categories

Source: Cook Islands Population Census, 1966

demands. Much the same applies to the two clothing factories whose employment levels remain closely tied to demand in New Zealand and fluctuate between 100 and 300 women. To some extent the whole economy seems geared towards the maintenance of a large under-employed labour force. Only the Administration seems to preserve any degree of stability in the number it employs, and even here the Public Works Department employs between 300 and 400 casual labourers on a daily basis. To a certain extent this situation is the product of a constantly shifting labour force brought about by the arrival of Outer Islanders and the emigration of many people to New Zealand.

PART II

AVARUA

PHYSICAL ASPECTS OF THE TOWNPopulation Growth and the Town

In many respects Avarua is not a truly urban settlement but an agglomeration of five traditional village settlements held together by a veneer of European commercial-administrative-industrial values. In 1966 Avarua had between 5,154 and 5,808 inhabitants depending upon how its boundaries are defined*.

This population included between 2,500 and 3,000 Rarotongan-born (many children of migrants), a small colony of 200 Europeans as well as approximately 2,300 migrants from the other Islands of the Group. The ethnic heterogeneity of the town's population is an important feature of the urban situation in which new sets of social relationships are forged and developed.

Since the beginning of this century there has been a substantial movement of population to the town. The urban population of Avarua, using the census criteria of the five village settlements*, has increased from less than 1,200 at the turn of the century to 2,192 in 1936 and 5,154 by 1966. Since 1945 more than half of Rarotonga's intercensal population increase has been absorbed by the town and in the last intercensal period the town absorbed 86 percent of the total increase even though it only housed about 51 percent of the total population. Less than half of this urban increase can be attributed to the natural increase of those inhabiting the town while a little over half the growth has arisen from migration from the other Islands and from overseas. The population of Avarua has been subject to the same influences which have affected Rarotonga's population but just as the principle of cumulative causation (Myrdal, 1957) has operated between Rarotonga and the rest of the Cook Islands, so too has the Avaruan population increased more rapidly than the rest of Rarotonga. In every intercensal period

* Figures I.1 and V.1 show the boundaries of the village areas making up the town of Avarua in 1966. See Appendix A.

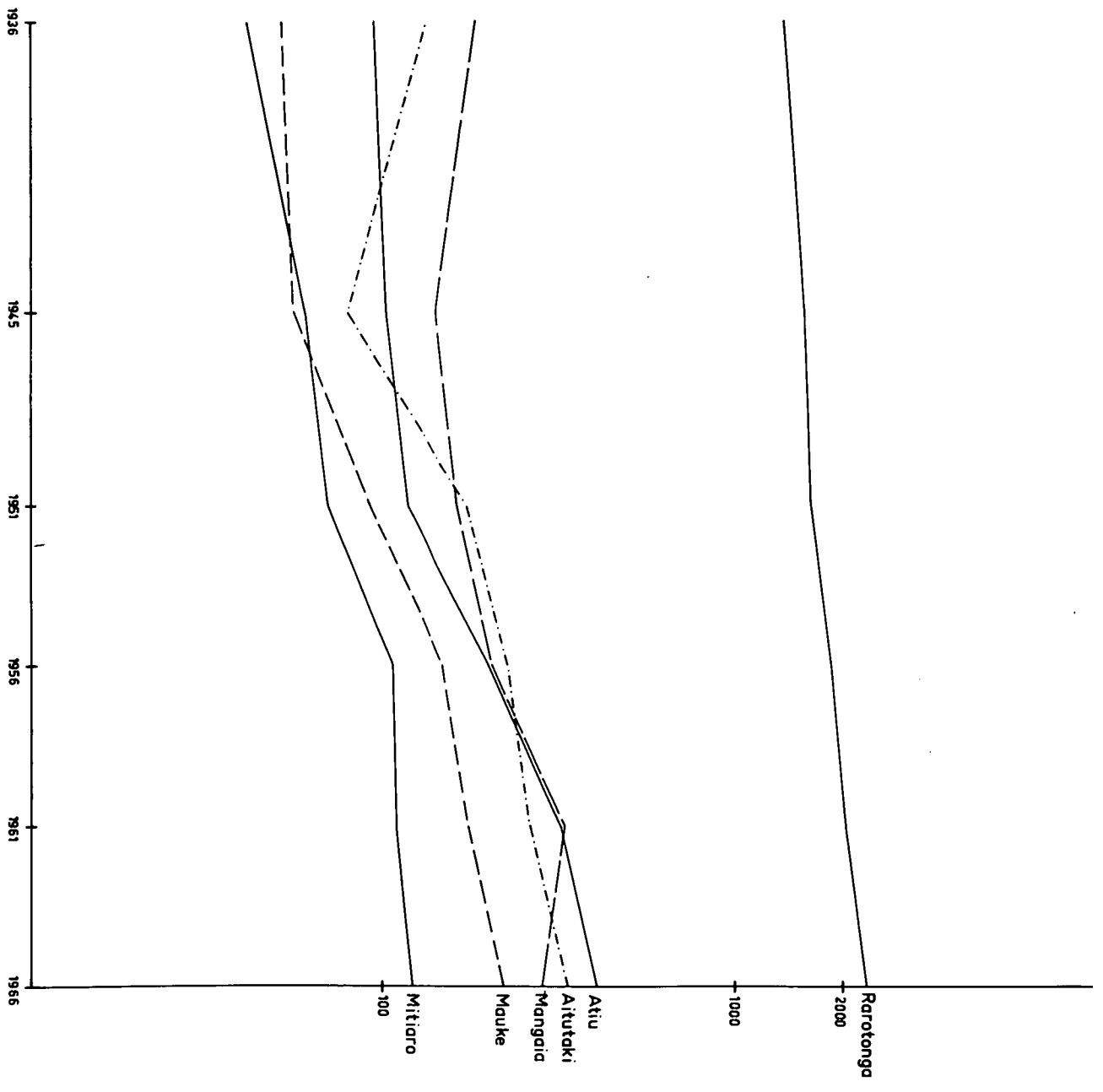


Fig. II.1 Southern Migrants in Avarua 1936-1966.

since 1945 Avarua's population growth rate has consistently outstripped that of Rarotonga. Even in the latest intercensal period (1961-66) when both the Cook Island and Rarotonga rates were considerably lower than in the previous intercensal period, the Avaruan rate remained high and even increased (see Tables 2.1 and 1.1).

Increased transport activity between the various Islands of the Group after 1945 led to a steady increase in the town's population*. By 1945 there were about 590 Outer Islanders in the town as well as approximately 80 Europeans. Five years later, these numbers had increased to 836 and 100 respectively. By the early 1950s many immigrant Cook Islanders were settling in the town for longer periods and sometimes on a permanent basis. Together with a small long-established French Polynesian element these longer-term migrants constituted a small but significant element of stable town-dwellers. By 1956 the immigrant Cook Island population had risen to about 1,196, and this total virtually doubled itself between 1956 and 1966 (see Figures II.1 and II.2). Thus the immigrant Cook Island population was, during the post-war period, registering a net average annual increase of approximately 13 percent. The continuous arrival of migrants meant that the town's population always contained a significant proportion of newcomers despite the increasing tendency after 1956 for migrants to settle permanently. The European community was equally involved in processes of change and adjustment, as short-term administrators, technical staff and school teachers served their contracts and were replaced by others.

Table 2.1 also reveals the average annual rates of growth of the major ethnic groups within the town. From these figures it can be seen that Southern and Northern migrants increased at roughly the same annual rate between 1945 and 1961, approximately $3\frac{1}{2}$ times that of the Rarotongan-born sector. Between 1961 and 1966 however, the rate of

* Unless otherwise stated 'the town' refers to the five villages of Pue-Matavera, Tupapa-Maraerenga, Takuvaine, Tutakimoa and Avatiu-Ruatonga (see Appendix A).

TABLE 2.1

AVERAGE ANNUAL RATES OF INCREASE

AVARUA* 1936-1966

Place of Birth

	<u>Total Population</u>	<u>Rarotonga</u>	<u>Southern Group</u>	<u>Northern Atolls</u>	<u>Other Polynesian</u>	<u>Metropolitan</u>
1936-45	0.23	1.39	-1.28	-1.3	-4.0	-
1945-51	2.33	0.75	6.97	6.86	-4.41	-
1951-56	6.01	3.11	8.33	7.94	7.71	-
1956-61	4.16	2.46	6.8	7.12	3.79	5.25
1961-66	5.69	5.18	2.66	17.07	1.06	9.1

Source: Cook Island Population Census 1936-1966.

* Excludes Nikao

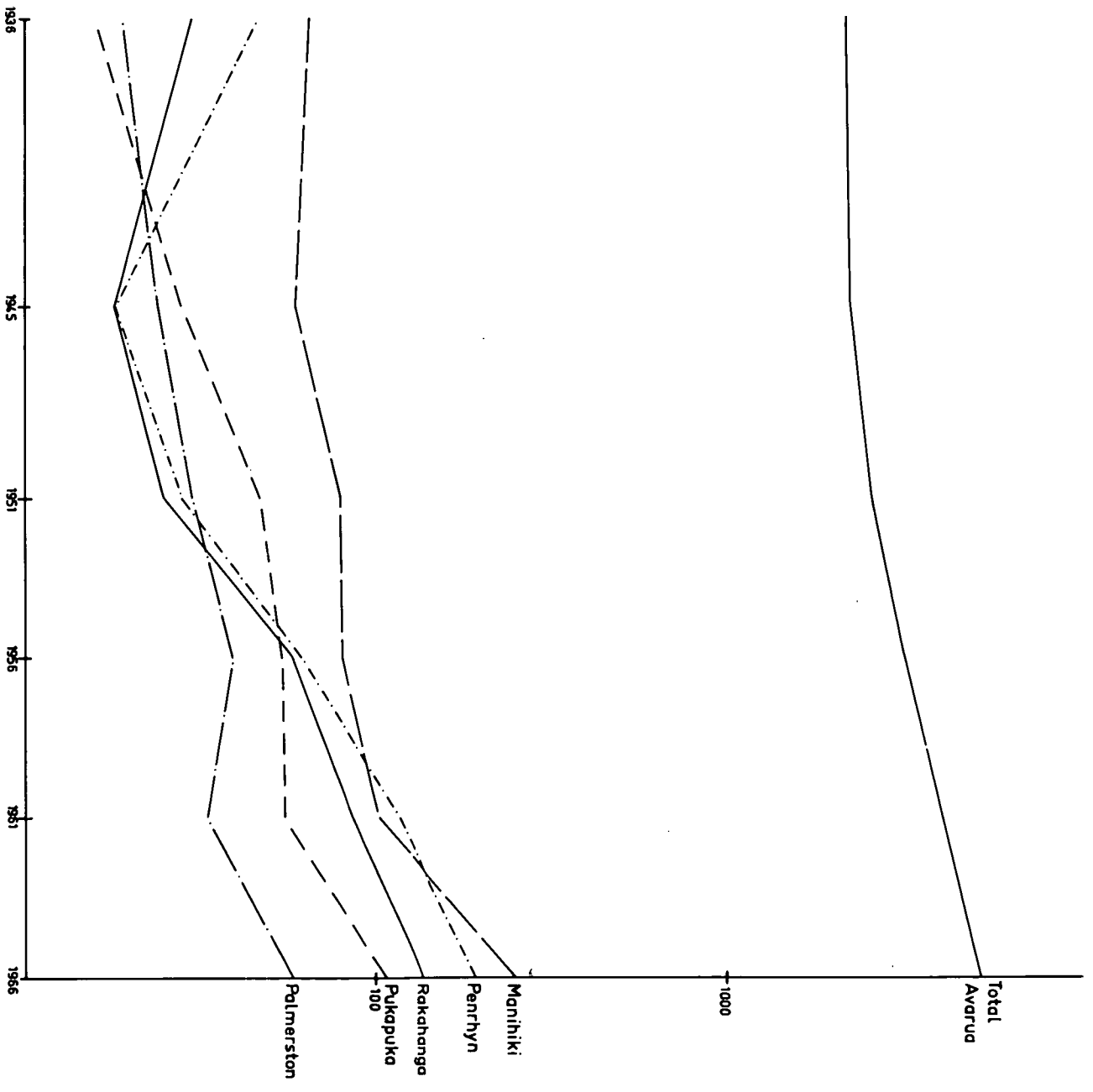


Fig. II.2 Northern Migrants in Avarua 1936-1966.

increase for Southern migrants in the town dropped to only 2.66 percent due to increased emigration to New Zealand (see also Appendix B). In the same period, the town experienced a considerable influx of Northern migrants who in only five years very nearly doubled their numbers at an average annual rate in excess of 17 percent.

Despite rapid growth rate after 1945, Avarua remained up until the 1960s, a quiet, isolated and slow-moving colonial town. The post-1960 period saw increased political and economic activity in the town and a rapid growth in the number of Islanders seeking to emigrate to New Zealand. There was a significant measure of industrial development as well and a broadening of administrative, medical and educational services. The most important industrial addition to the town was the Island Foods fruit juice factory and cool store.

Pattern of Urban Growth

Avarua stands on the northern coastal plain of Rarotonga in a rough semi-circle around the two main breaks in the surrounding coral reef. The site of the town is on a narrow coastal strip backed by steep rugged bush-clad peaks rising in places to over 2,000 feet. A cross-section of the coastal plain indicates an outer rim of storm-accumulated coral sand land-locking an area of fresh water to form an area of low swampy land. On the inland side of this area the land rises gradually to merge with a belt of fertile alluvial land that extends toward the base of the inland mountains and up the numerous valleys with their ancient irrigated taro terraces. Several parts of the town lie below 10 foot above sea level and are frequently subject to flooding from one of the three prominent streams which dissect the town and flow into the sea. Rarely does any part of the town exceed a height of 20 feet above sea level. One of the major physical disadvantages of the town is that it lies directly exposed to the north-west hurricane belt and since 1831 has been subject to a number of severe hurricanes.

The present town has grown from the small mission station established by the L.M.S. in 1827 to a well-established administrative

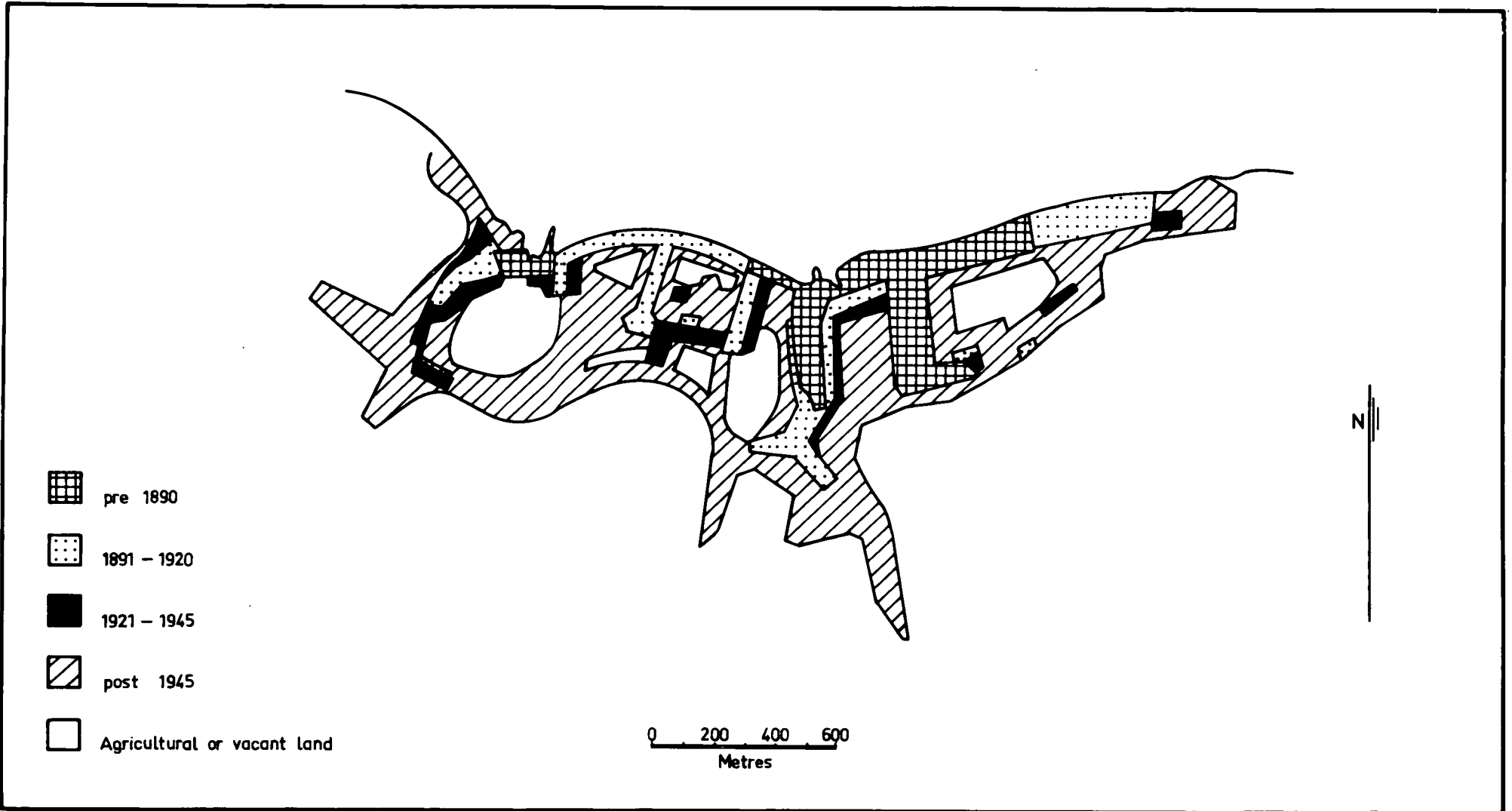


Fig. II.3 Pattern of Growth Avarua.

and commercial centre dependent upon the only two workable harbours in the Group. Since the last few decades of the Nineteenth Century the town has exhibited a number of distinctive phases of physical growth culminating in the rapid suburbanisation of the last 20 years.

1. Pre-1890 Growth

In general it appears that the present town has grown from a fusion of three small nuclei of pre-1890 settlement, one centred on the L.M.S. church and mission station at Takimoa with extensions along the waterfront road to Maraerenga; another centred on the main wharf at Avarua and up the Takuvaine Road to the Ara Metua, and finally, a small nucleus of pre-1890 settlement opposite the wharf at Avatiu (see Plate I). The Avarua wharf and the nearby mission station formed an effective nucleus around which growth has subsequently occurred. The map showing broad phases of growth in the town (Figure II.3) shows the manner in which growth has occurred about this central core.

2. 1891-1920

The 30 years after 1891 saw the town expand along the waterfront road to Pué and in a westerly direction a ribbon of settlement connected Avarua with the small settlement at Avatiu. A small strip of development also extended to the Roman Catholic establishment in Tutakimoa while a subsidiary finger of settlement extended down the Avatiu Valley Road. Finally, a small scatter of houses began to appear up the Takuvaine Valley.

3. 1921-1945

By 1920 and up until the outbreak of war, the town was largely confined to the area along the coastal road between the hospital at Pué and A.B. Donald's store at Avatiu (Figure II.4). After 1920 a further extension of settlement extended up the Lower Takuvaine Valley to the Ara Metua. In addition, a small ribbon-development of houses extended



PLATE I

Upper: General view of inter-Island wharf facilities at Avatiu.

Lower: Aerial view of Avatiu wharf facilities showing A.B. Donalds in foreground.



PLATE II

Upper: Central Avarua showing part of Tutakimoa (upper left) and Lower Takuvaïne (centre upper right). Note the inter-penetration of agricultural land-uses into the town.

Lower: Eastern Avarua showing part of Maraerenga and Tupapa.



PLATE III

Upper: Recently constructed loan house at Avatiu.

Lower: Part of the town's main irrigated taro area to the west of Avatiu and Atupa. Note the well-defined plots and irrigation channels.

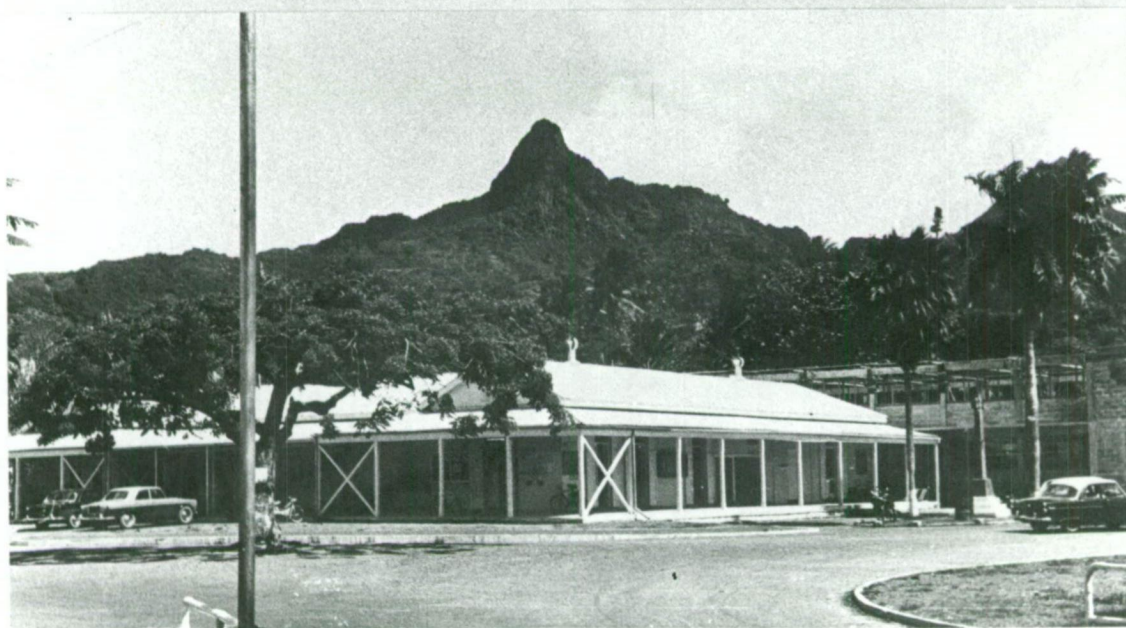


PLATE IV

Upper: The Union Steam Ship Company sheds and office, Central Avarua.

Lower: The Central Administration block housing the Justice, Police, Survey, Premiers and Post office departments in 1966. Behind and to the right may be seen the new G.P.O. and administrative block in construction.

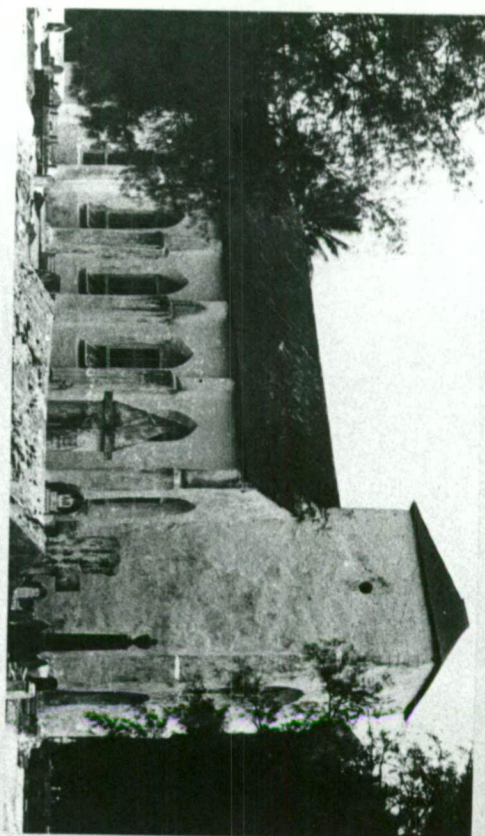
Examples of Nineteenth Century building styles utilizing corallite and corrugated iron materials.

a: LMS church at Takimoa built in 1843.

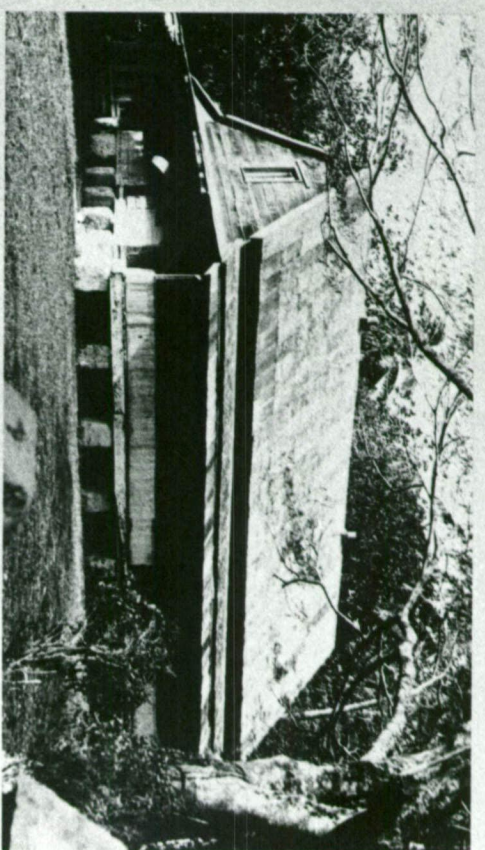
b: Private house in Avatiu.

c & d: Small private houses in Tupapa.

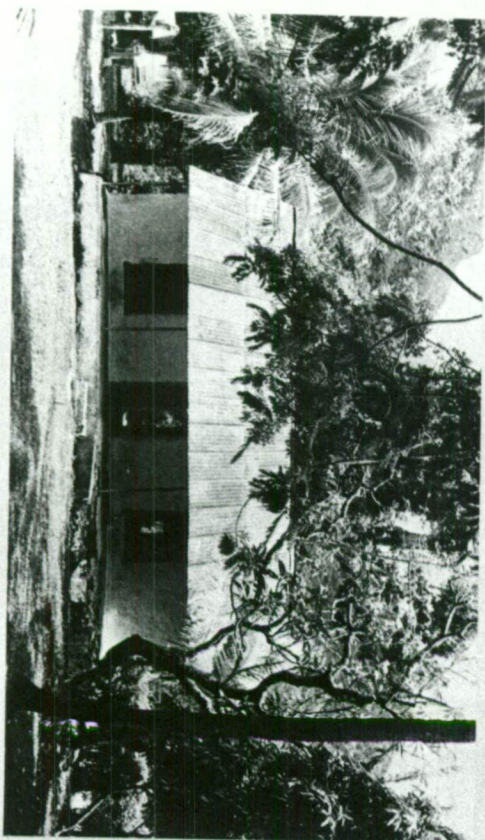
PLATE V



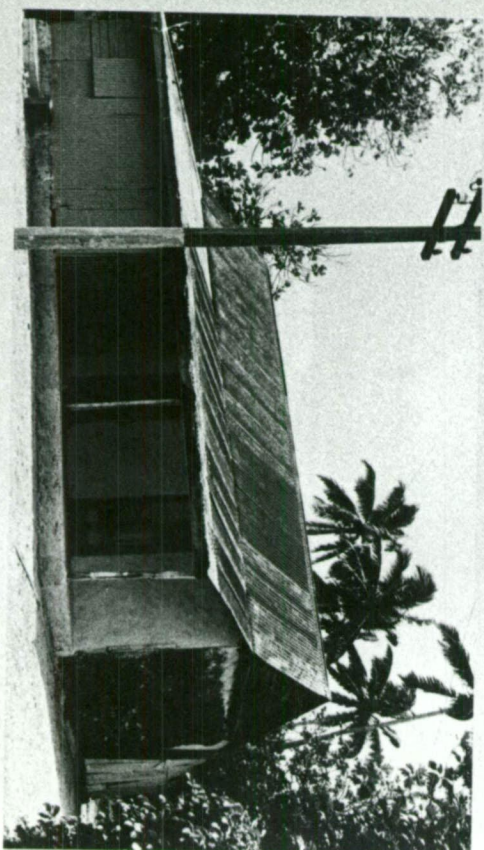
a



b



c



d

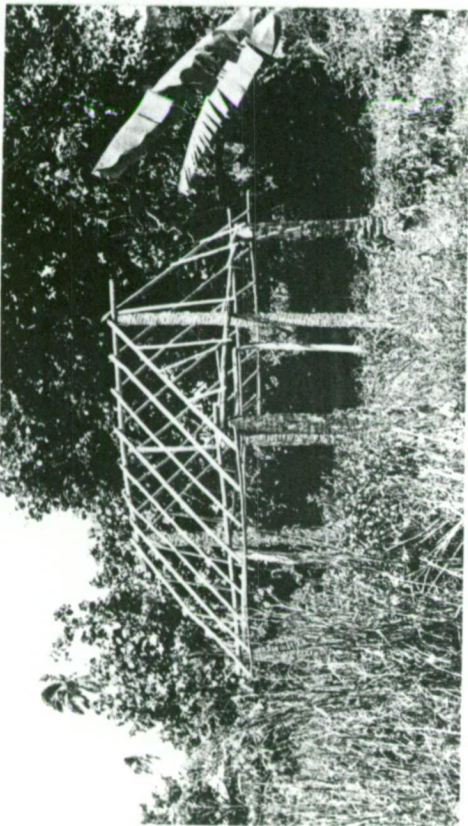
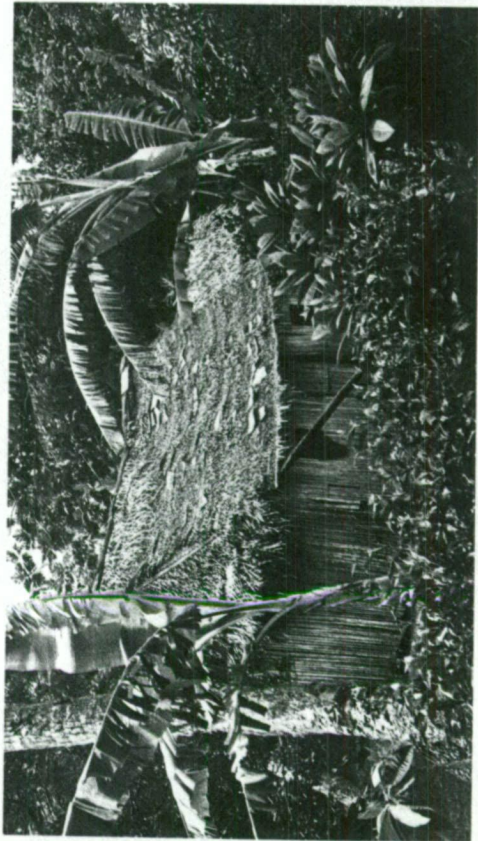
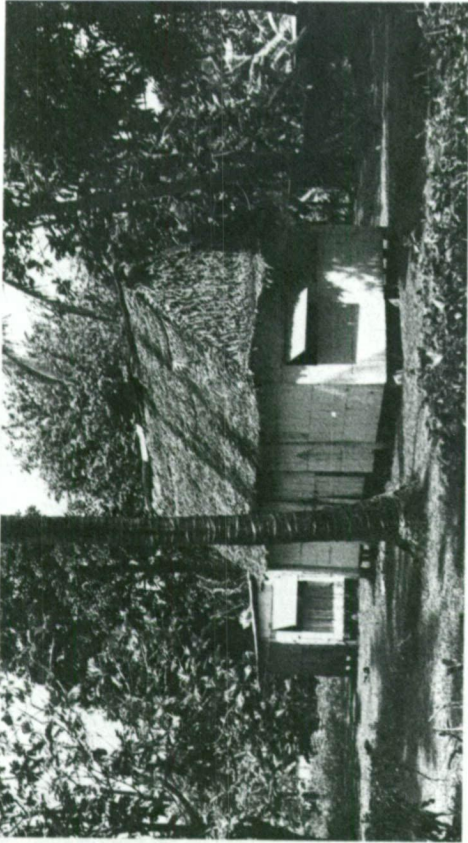


PLATE VI

Traditional Kikau housing forms showing the main method of construction (upper left), the main present-day variant combining introduced building materials with traditional (upper right) and a strictly traditional house (below).

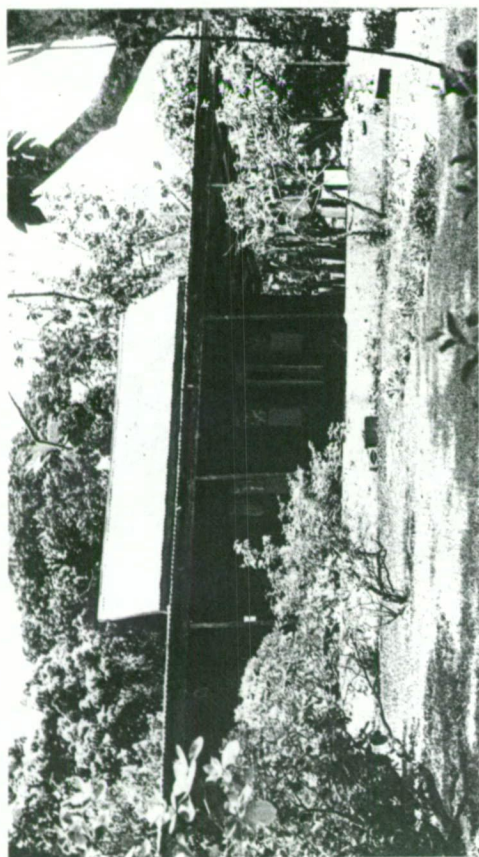
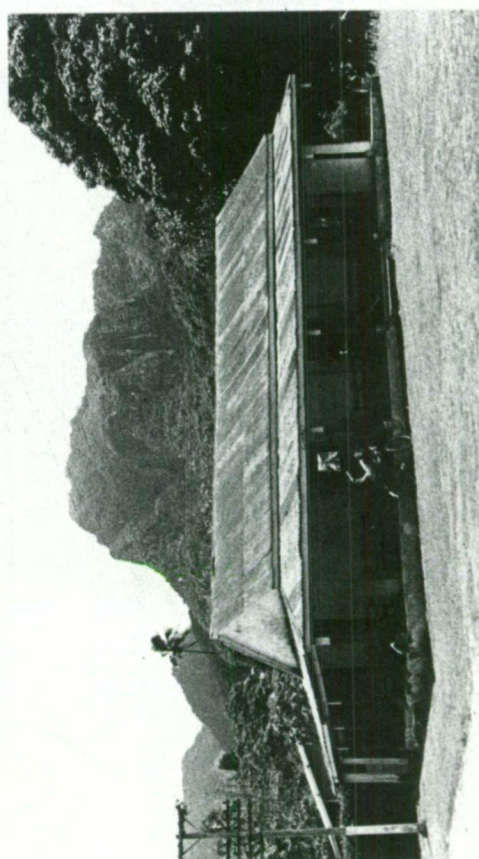
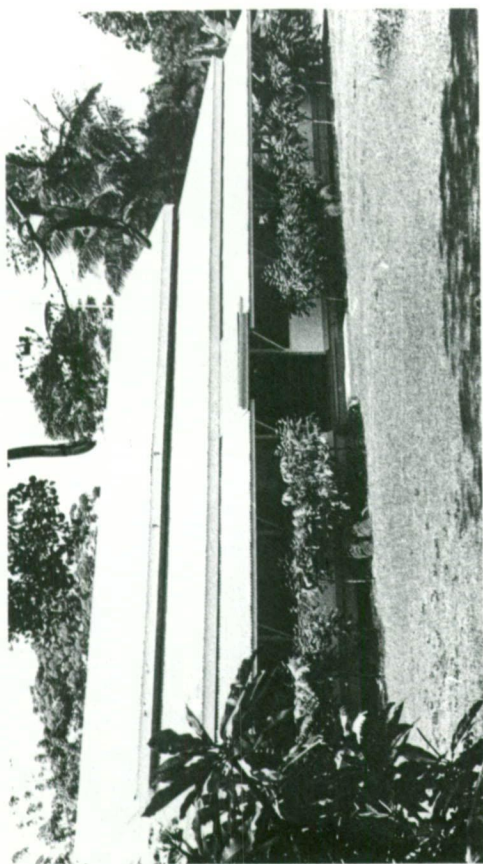


PLATE VII

Three examples of New Zealand inspired Colonial forms of domestic architecture dating from the 1900-1926 period. Note the large encompassing verandah.

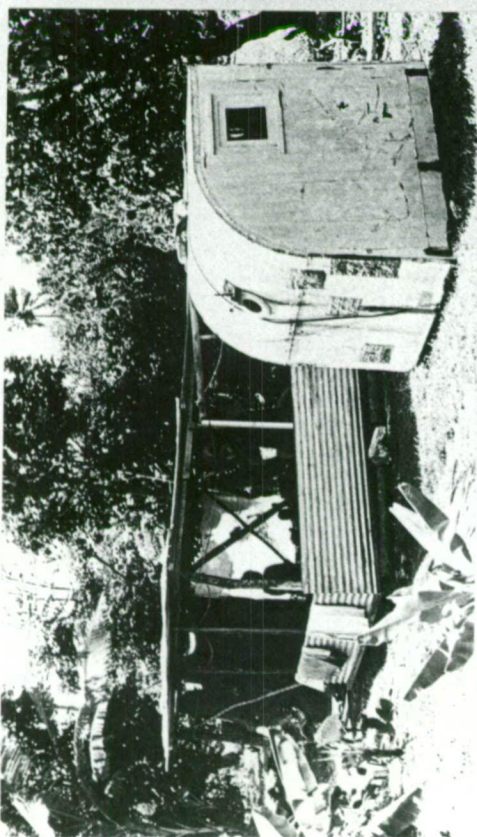
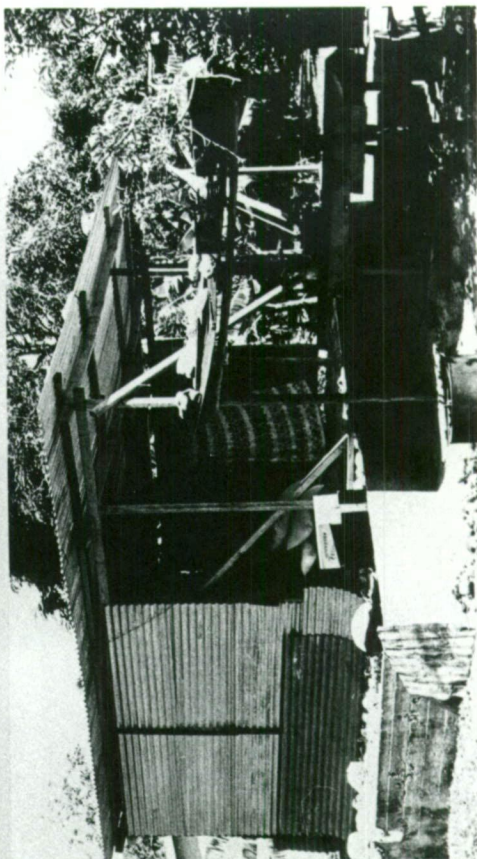
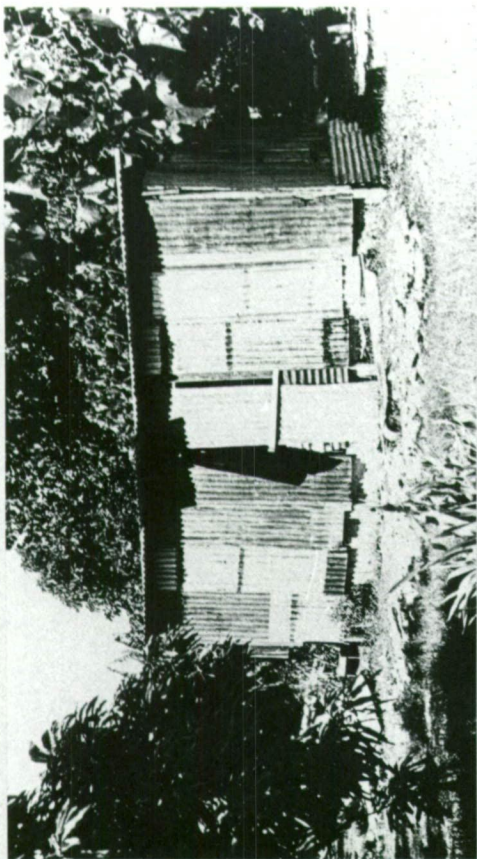


PLATE VIII

Four examples of migrant housing forms drawn from Tutakimoa. Note the use of a variety of extraneous materials such as packing cases, corrugated iron sheets and coral.

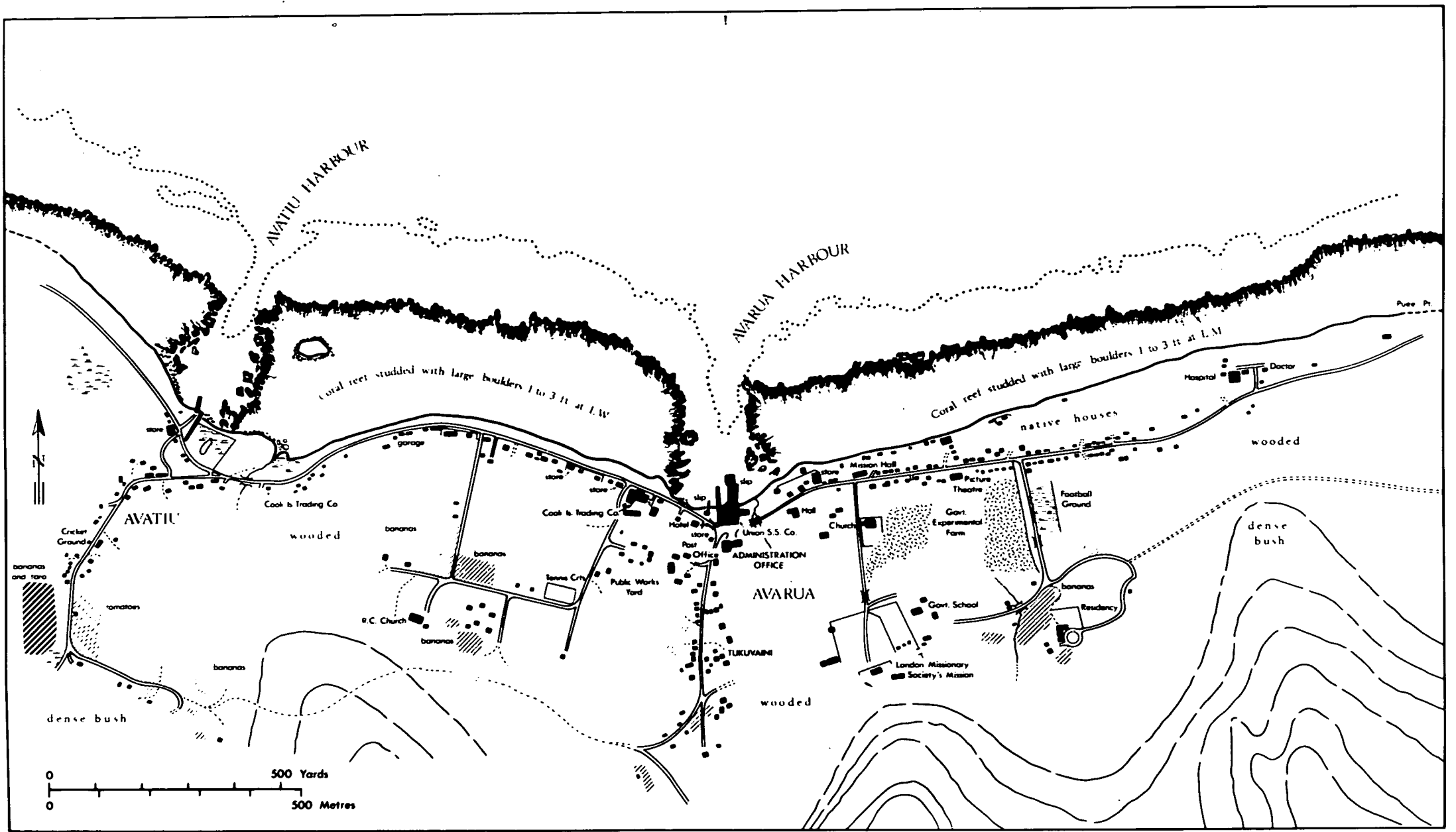
from Avatiu up the valley road to the Ara Metua. Tutakimoa consisted of a small scatter of dwellings in close proximity to the Catholic church and mission buildings. Large areas of the town were wooded or under dense bush. Commercial agriculture was carried out within the town's confines with a Government experimental farm at Tupapa and extensive banana plots in Tutakimoa, Avatiu and Ngatipa (see Figure II.4). The main wharf and adjacent administration offices formed the chief nucleus of the town with a commercial extension in both directions along the main waterfront road. The main shipping and wharf facilities faced the small break in the reef at Avarua from where all visiting ships were worked by means of small boats and lighters. Migrants from the Outer Islands were largely concentrated between the main road and the sea at Tupapa in a collection of small kikau and makeshift huts. At Pué the new hospital built in 1910 formed the western limit of the town.

After 1921 the town grew very slowly and growth mainly consisted of small accretions to the existing settlement pattern mainly in lower Takuvaie, Tutakimoa and at Avatiu.

4. 1945-1966

The post-war years saw a vigorous growth on the peripheries of the town as well as considerable consolidation of existing areas. Settlement pushed further up the Takuvaie valley and developed on the inland side of the Ara Metua. Settlement also pushed out on the most westerly and easterly fringes of the town. In many cases this growth resulted from the influx of landless migrants who erected substandard and temporary dwellings. The modern growth of the town dates from 1945 with the completion of an air-strip on the Island and the extension of regular air and sea services between the Island and New Zealand. New industrial establishments were added to the town in the form of a clothing factory, two small handicraft/jewellery plants and finally the Island Foods juicing and canning factory with associated cool store.

Fig. II.4 Avarua in the 1920s.



In addition, new concrete buildings were erected to house government offices, hospital, secondary school and hotel.

Most of the construction and development, especially post-war growth, was completely innocent of any planning. No acts or regulations existed to govern the minimum area for housing sites and spaces between buildings. No minimum requirements were set with regards building materials or design. Land-use zoning was completely unknown with a result that the town of today is a mixture of old and new, good and very bad housing with a lack of essential water and sewerage services and a largely inadequate subsidiary road system.

Growth since the Nineteenth Century has to a certain extent occurred in a concentric fashion from a single dominant core (see Figure II.3), although of equal importance has been infilling and consolidation by subdivision of existing home sites within the town. By 1966 Avarua was embarked on a phase of rapid expansion. Between 1961 and 1966 the rate of increase of the population was of the order of six percent per annum. Since 1966 the building of new administrative offices, new shops, new hospital, new wharf facilities and a jet air-strip have all created the conditions for a further acceleration in urban growth.

Ownership of Property

The pattern of land ownership within the town is complex, reflecting historical and traditional factors. The traditional land tenure system and its Twentieth Century modifications has been well documented by Crocombe (Crocombe, 1964). Suffice it merely to mention here that the system on Rarotonga is basically one of succession through descent via both patrilineal and matrilineal lines. An individual having authenticated his descent from a common ancestor who had occupied a piece of land can, after investigation of his title by the Native Land Court inherit that land or an interest in it. On his death, his children may succeed equally to his interest by a 'succession order' perpetuating along the line until the lineage ends without issue

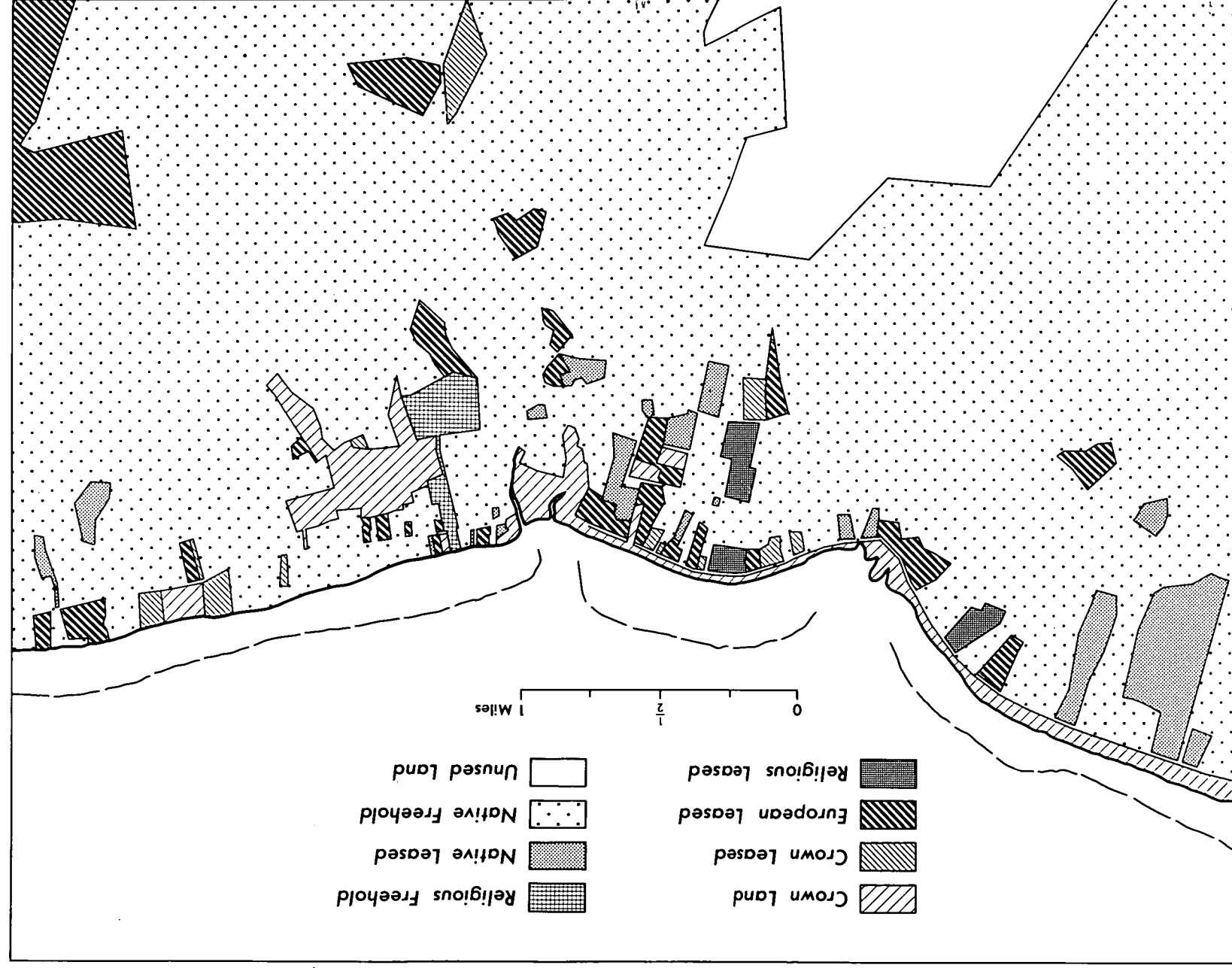


Fig. II.5 Ownership of Land 1966.

whereupon the share reverts for equal distribution among surviving relatives. Land cannot be willed as with chattels. Strictly speaking, therefore, land is not owned but simply held in trust for successive generations. Patrilineal and matrilineal succession such as this results in a person inheriting land rights in different villages or Islands depending upon the birthplace of his progenitors. In general, most rights to land depend upon the degree of succession rather than on a strictly defined share determined by tradition or position. Intermarriage between Outer Island migrants and local groups is very common on Rarotonga and has resulted in considerable fragmentation of land rights. For example, the offspring of a Rarotonga-Manihiki union could expect to inherit land on both these Islands. It has been stated that if the present system continues unchanged then every Islander on each Island, will in the course of time, become an owner in every portion of that Island and infact in all the Islands of the Group.

By 1966, 6,938 or 70 percent of Rarotonga's population possessed some right to land in one of the outer Islands and the percentage is even higher for the 15 to 29 year age group (Table 2.2). Unfortunately the unpublished census table from which these figures are drawn does not distinguish exactly how many people possess a claim for each Island because many Rarotongans possess land rights in more than one Island. Nevertheless, the figures disclose the magnitude of the problem.

Figure II.5 details the pattern of land ownership in Avarua in 1966. Seven tenure categories are recognised.

1. Crown Land

As in most colonial towns the Government took over some of the land at annexation either by order-in-council or by lease-in-perpetuity for public purposes. In 1966 there was a little over 194 acres of public land in the town. Most of this land was acquired by the Crown in the 1891-1906 period and includes the large central block housing the

TABLE 2.2

ISLANDERS RESIDENT ON RAROTONGA
WITH LAND RIGHTS ON OTHER ISLANDS

Other Islands in Which Land Rights Held													Total	
Age Groups		Aitutaki	Mangaia	Atiu	Mauke	Mitiaro	Manuae	Palmerston	Pukapuka	Manihiki	Rakahanga	Penrhyn	Land rights in other islands	No land rights in other islands
Under 15	M	451	514	416	264	126		38	44	247	141	77	1723	641
	F	508	548	396	228	156		38	33	217	154	81	1770	647
15-29	M	243	249	213	105	75	1	11	35	108	69	54	937	348
	F	217	285	211	114	76		18	21	109	71	40	956	359
30-64	M	150	231	144	81	49		17	24	78	50	22	714	479
	F	139	199	126	51	42	1	13	21	86	68	41	671	345
65+	M	16	34	7	7	6		4	4	6	5	3	84	75
	F	12	31	14	13	7		2	2	8	7	3	83	72
Total	M	860	1028	780	457	256	1	70	107	439	205	156	3458	1543
	F	876	1063	747	406	281	1	71	77	420	300	165	3480	1423

Source: Unpublished table from 1966 Census of Population

administrative offices, Court House, G.P.O., Legislative Assembly, Hotel, Bond and Cool store, and Radio Station adjacent to and including the main wharf building and facilities (this latter leased to the USS Co. Ltd.) and the foreshore west of this central area. The Crown also holds a large block of land in Tupapa-Ngatipa which includes the New Zealand High Commissioner's house and grounds, a public school and associated facilities. Apart from these two major areas, the Crown has also extended its influence into the residential area of Tutakimoa providing residential sites for senior administrative officers as well as land for a dental clinic at Maraerenga and the hospital and associated dwellings at Pué. Further to the west beyond the limits of the town proper at Nikao, Crown land includes the air strip and associated buildings (more than 77 acres in 1966), the Tereora College grounds, Radio Station, and the Nikao Side School.

2. Crown Leased Land

Since the end of World War II it became necessary for the Crown to obtain more land for expatriate and senior administrative officer housing and for additional services within the town itself. Additional land was leased for the hospital and Chief Medical officer's house at Pué as well as for the power generating station at Tutakimoa and the Ionosphere Station at the top of the Takuvaine valley. A series of sections were also leased in Ruatonga and Tutakimoa for senior public servants' housing and 57 acres added to the Tereora College*.

3. European Leased Land

The amount of land leased to Europeans has never been very considerable on Rarotonga. By the first two decades of this century there were approximately 25 Europeans leasing some 1,700 acres on the Island. By 1966 this number had increased to 53 and the acreage to

* 28 acres were also leased for a radio transmitting and receiving station beyond the town proper at Black Rock, Nikao.

2,230 (Land Court Records, Rarotonga). The majority of this land was found in the Takitumu district and only 392 acres were within the town or its immediate environs. Within Avarua, the large commercial enterprises (CITC, UIT, South Pacific Trading Company and A.B. Donalds), the two handicraft factories, Scott and Watson's Clothing factory, together with many European house sites are all located on leasehold land. Some citrus plantations leased by Europeans are also located within the confines of the town - specifically on the inland side of the Ara Metua and up the Takuvaine Valley.

4. Native Leased Land

In 1966 a small amount of town land was held by Cook Islanders under a leasehold tenure. The majority of this land was leased to Outer Island migrants for house sites or to indigenous commercial undertakings such as the Co-operative bank.

5. Land Vested in Religious Bodies

In 1966 the L.M.S. owned 10 acres of land in Takuvaine and was the only religious body to have acquired a direct title to land in the town.

6. Religious Leased Land

The three major churches all leased land for their mission establishments within the town. The Catholic mission leased approximately five acres in Tutakimoa, the L.M.S. one acre at Nikao while the Church of Latter Day Saints leased approximately $2\frac{1}{2}$ acres at Avatiu.

7. Native Freehold Land

Native freehold land is either land held under Maori Custom where ownership has been determined by the Native Land Court or customary land where individual owners have not as yet been determined. In recent years an 'occupation rights' form of tenure designed to enable a person to occupy a piece of land for an indefinite period without interference

from other shareholders has become of some significance within the town especially in the case of Outer Island migrants.

Security and independence of tenure of land required either for a house site or for cultivation may be obtained only by some form of lease or by an 'occupation right' the latter at the pleasure of shareholders and subject to the Land Court's approval. To obtain the Court's sanction for either a lease or 'occupation right' the person concerned must have contacted and gained the permission of all living persons with an interest in that land. In many cases such negotiations involve considerable time and difficulty. This may be illustrated by a recent instance wherein to negotiate a lease for a small plot of land in Tupapa the intending leasee had to contact 92 "owners", 39 who lived in Rarotonga, four in Aitutaki, four in Mangaia, two in Atiu, one in Manuae, two in Manihiki, one each in Penrhyn, Samoa and Fiji, two aboard ships and finally 31 in New Zealand. When it is realised that a very high proportion of Islanders are now living in New Zealand or are resident on Islands other than their own, it can be appreciated how difficult it often is to obtain some right to occupy or work a piece of land. Such absenteeism hampers the full economic development of land and causes much land to remain unoccupied.

PATTERNS OF LAND-USE

It is true that a great part of present-day Avarua carries over the physical and social characteristics of traditional village life modified by many years of outside contact. There is no municipal authority and consequently no town regulations and in addition a large number of the town's inhabitants are part-time subsistence workers.

The map of present day land-use (Figure II.6) shows clearly the lack of any overall planning or land-use zoning. There is, however, some segregation and sorting of functionally segregated areas into a distinctive pattern. Access to the sea frontage via the two main breaks in the reef at Avarua and Avatiu has played a major role in the development and spatial patterning of the town. Large tracts of land

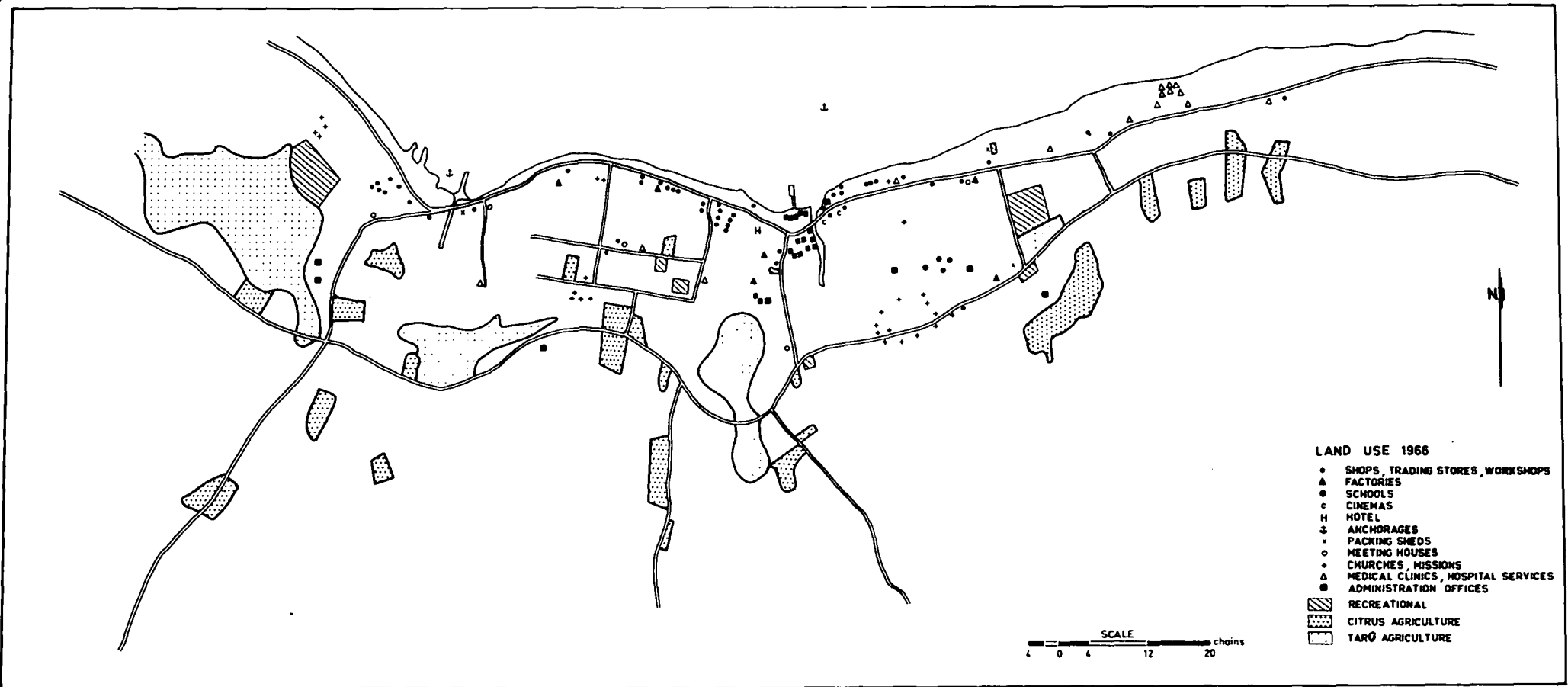


Fig. II.6 Land-use 1966.

within the town are in bush, scrub or coconuts or in use for subsistence or cash cropping (see Plate II). Three major belts of irrigated taro land lie within the town - one west of Avatiu (see Plate IIIa), one on the Ara Metua at Ruatonga and one on the Ara Metua at Takuvaine. In addition, small citrus plots are scattered throughout the town generally on the inland side of the Ara Metua and especially up the Avatiu and Takuvaine Valleys.

The villages comprising Avarua are strung out along the main coastal road in ribbon fashion between Pué and Avatiu-Atupa. In the Nineteenth Century the larger nucleated villages were clustered around the mission station at Takimoa but with pressure from over-crowding and the influx of Outer Islanders the need arose to move further inland creating a ribbon development along the Ara Metua and up the valleys. In many ways this centrifugal movement of population represented a desire to be nearer traditional croplands but it was also a desire to escape the noise, over-crowding and bustle of the town. It also represents a good example of the gradual breakdown of the extended family structure in preference for the more independent nuclear family unit.

Administrative and shipping facilities provide a dominant core opposite the wharf at Avarua (see Plate IV). Here are concentrated most of the Administrative offices, Court House, Legislative Assembly, Radio Station, G.P.O., Police Station, Bond and Cool Store and Hotel together with the USSCo. offices. Commercial and retail functions are segregated equally clearly. The central retail core is concentrated west of the administrative complex on the coastal roadway at Parekura-Tutakimoa. The most characteristic form of establishment here is the large trading store with branches in the Outer Islands, such as the Cook Islands Trading Company (CITC), and the United Island Traders (UIT). These stores usually sell clothing, household textiles, soft furnishings, domestic hardware, foodstuffs and other items. A smaller cluster of retail establishments extends eastwards from the administrative complex about 100 yards up the road to Maraerenga. A.B. Donald's general store at Avatiu (dating from the late Nineteenth Century) forms the

centre of a subsidiary retail complex at Avatiu with Pembertons and Napas small stores nearby. Smaller shops are distributed where there might be trade in the villages of the town, specifically in Tutakimoa, at Pué, and on the Ara Metua at Tupapa.

Industry is a much more recent addition to the town and apart from the large Island Foods factory opposite the G.P.O. - Administrative complex consists only of a clothing factory at Ruatonga, two wood carving/pearl shell factories (one at Maraerenga and one at Tutakimoa) and various small servicing workshops.

Medical facilities in the form of the old hospital block, nurses' home and new outpatients block are concentrated at Pué with the exception of dental services (at Maraerenga) and medical clinics scattered throughout the village settlements of the town. Also scattered throughout the villages are the traditional meeting houses, one in each village settlement, where traditional ceremonial life continues to this day.

Housing in Avarua

1. Types and Distribution

In Avarua, dwellings generally reflect a number of major influences in building styles. The traditional influence is still readily apparent although in many cases modified by the addition of non-indigenous material such as ridge-iron or hardboard sheets. Over recent years the types of houses have changed considerably traditional materials gradually being replaced by concrete, imported timbers and other non-indigenous materials. Although these newer materials have many advantages in lasting value and the need for less maintenance, the method of construction often leaves much to be desired. A basic ignorance of building, ventilation and sanitation standards has resulted in many houses being built in a rather 'slapped-up' style with few windows and very small rooms. Changing patterns in housing largely reflect the changing value systems of the local community. To live in

a concrete house with louvre windows and roofing iron is regarded by many as a status symbol. It is also a reflection of the economic status of the community and a general desire to improve the way of living. But generally there has been a lack of supervision of building methods with no adequate investigation as to what architecturally best suits local conditions.

(i) Pre-1914 Houses The mission period is reflected in the town by dwellings constructed of thick coral walls with small glass windows or board shutters. The majority of these houses are built of coralite (burnt lime) whitewashed with corrugated iron roofing (see Plate V). Today the whitewashed walls have lost their whiteness while most roofs are rusty and leaky through lack of attention. Many gaunt lime walls stand, long ago abandoned as a reminder to the force of past hurricanes. It was the original intention of the missionary order that all houses in the town should be of this type. Many such dwellings are unoccupied or substantially modified while those still in use are often sadly in need of repair, their wooden floors have long rotted away and their roofing iron is rusty with many holes. In 1966 there were 41 dwellings of this style still occupied in more or less unmodified state, the majority located in the Maraerenga-Tupapa-Lower Takuvaine area.

(ii) Traditional Kikau Houses The traditional kikau house with baton or strip walls and kikau or pandanus roofing is today unfortunately disappearing and in many cases is used only as a subsidiary sleeping or cooking house. Trunks of breadfruit, coconut and other trees are used for the framework while the roof is thatched with plaited coconut fronds. Screens of kikau or slabs of hibiscus or wood strips form the walls. Kikau thatch has a life of a little over one year and its frequent replacement has placed an additional burden on coconut trees. Moreover, the intricate and delicate art of plaiting associated with such roofs is today fast disappearing. The framework and construction of such houses still largely follows traditional concepts and methods. Two central ridge-posts, one at each end of the dwelling are set into a levelled surface with their upper ends slightly grooved to support the ridge-pole (Plate VIa). A horizontal ridge-pole is layed between the two end posts. Four corner and side posts are sunk into the ground to

support the wall covering. On to this supporting system a framework of thin poles and rafters is laced to give a gabled laticework capable of supporting the thatched roofing material (see Buck, 1927: 3-6). In some cases the roof is crowned along its length with a narrow sheet of corrugated iron although in traditional times an intricately plaited sheet of kikau formed the ridging. Traditionally, walls seem to have been constructed of vertical strips of hibiscus (hau) although this is relatively rare in the town today. Nevertheless a few such houses do exist (Plate VIc) even though they mainly function as cooking houses (hare umu). Today there is wide variation and modification of this traditional house style. Corrugated iron, hardboard, asbestos sheets (fibrolite) and sawn timber are now more often than not incorporated into the original design as are packing cases, flattened petrol drums and other building materials (Plate VIb). In 1966 just over one-fifth of all houses in Avarua were of the traditional or modified kikau design, the majority incorporating the traditional framework and structure, with a wide variety of non-indigenous wall and roofing materials.

(iii) Early Colonial Forms The early period of New Zealand administration (1900-1945) is today reflected in a small number of dwellings within the town. Usually these are constructed of weatherboards with iron roofing and a large encompassing verandah encircling a central box-like structure (Plate VII).

(iv) Post-war New Zealand Housing Since 1945 there has been increasing growth of small box-like houses on the European model, many with iron roofs, asbestos sheet or milled timber walls set on concrete foundations (see Plate IIIa). Many of these houses correspond with the activity of the Housing Loans Board in making money available for housing loans after 1957. In 1960 a non-security loans scheme for housing was introduced in an effort to upgrade housing conditions on the Island. The scheme was based on a £150,000 grant from New Zealand for distribution at the rate of £20,000 per year. By May of 1966 more than 1,500 applications had been made to the Board and 800 loans granted (Files Social Development Department, Rarotonga). Of these more than 95 percent were for non-security loans of up to \$400. These loans were

for building a simple unlined box-type house with concrete floor and fibrolite walls, louvre or shuttered windows, providing sleeping quarters and a living room. Kitchen and toilet facilities were normally located under a separate roof nearby. Many of these loans, however, were used for the renovation or modification of older existing houses or for specific water and power installations. In January 1966 the Cook Islands Government raised the maximum loan without security to \$800 and loans with security to \$5,000 at interest rates of three percent. With these 'securable' loans the housing section is mortgaged so that there must be security of tenure over the site confirmed by the Land Court. In 1966 there were 56 new 'loan houses' in the town and 40 houses substantially altered or renovated by the use of a housing loan.

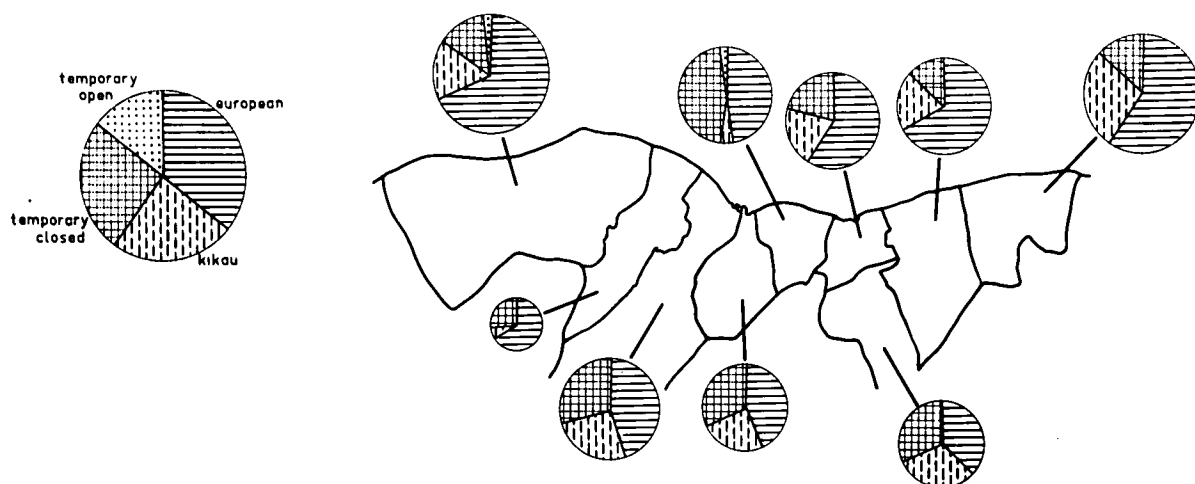
(v) Post-war Migrant Housing The influx of many Outer Island migrants to Rarotonga after 1945 has had a marked impact on building styles within the town. This immigration has produced a wide variety of makeshift and temporary dwellings utilising local materials and a combination of extraneous materials such as ridge iron, hardboard sheets, packing cases, flattened oil drums, iron sheets, and cardboard (see Plate VIII). While the standard of these houses varies considerably, most are small, overcrowded, poorly constructed and often devoid of any water or sanitation facilities.

2. The Distribution of House Types

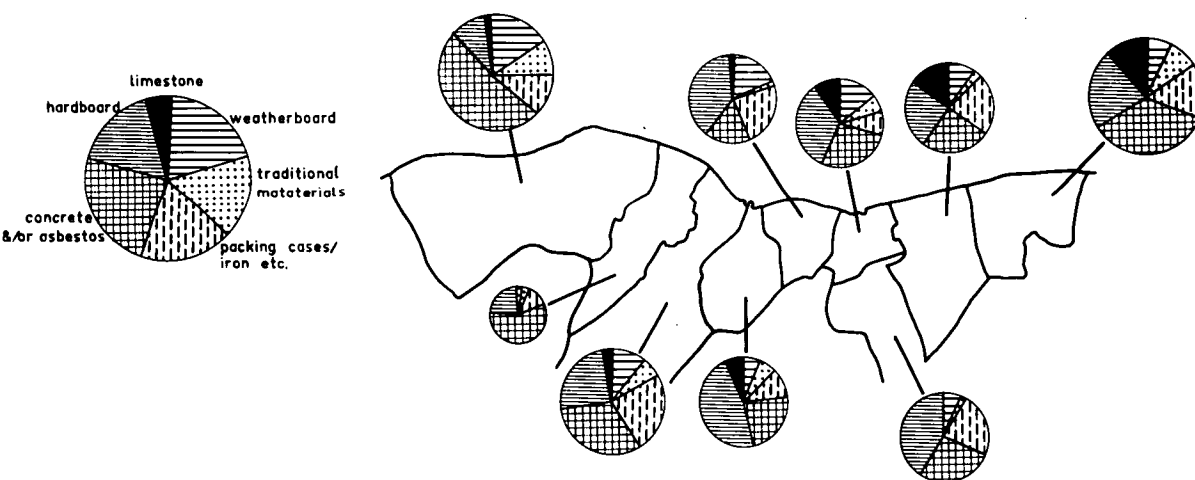
In 1966 a little over 52 percent of all houses in Avarua were of the European style whether Nineteenth or Twentieth century, one-fifth were of the traditional kikau style and an additional 27 percent could be classified as temporary makeshift style. Figure II.7 shows how the distribution of the various classes of dwelling varies for the nine subdivisions of the town*. European style housing is more significant in Nikao, Maraerenga and Atupa and lowest in Upper Takuvaie. The

* See Figure V.1 and Appendix A.

TYPE OF DWELLING



MATERIALS OF WALLS



HOUSING CONDITION

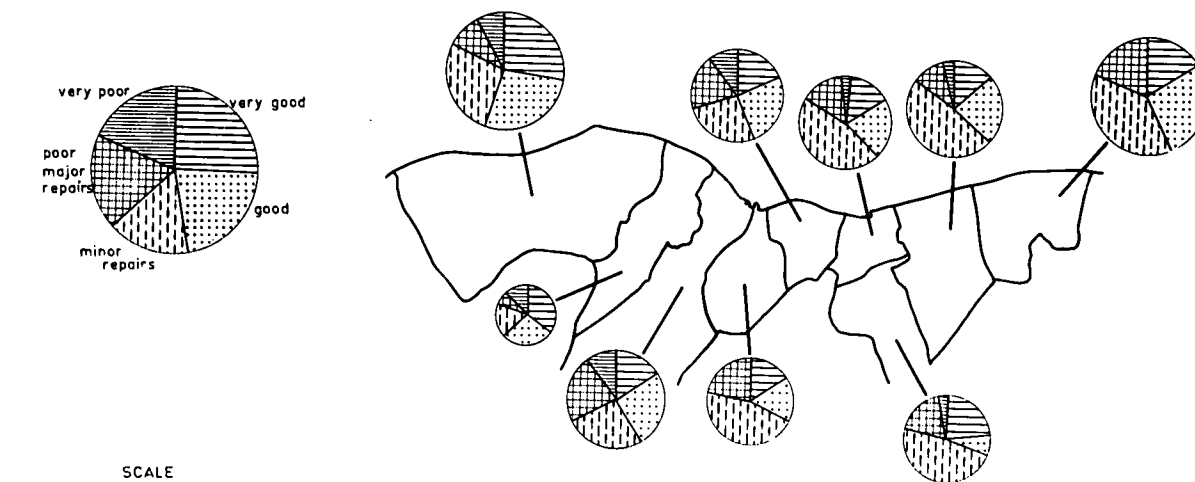
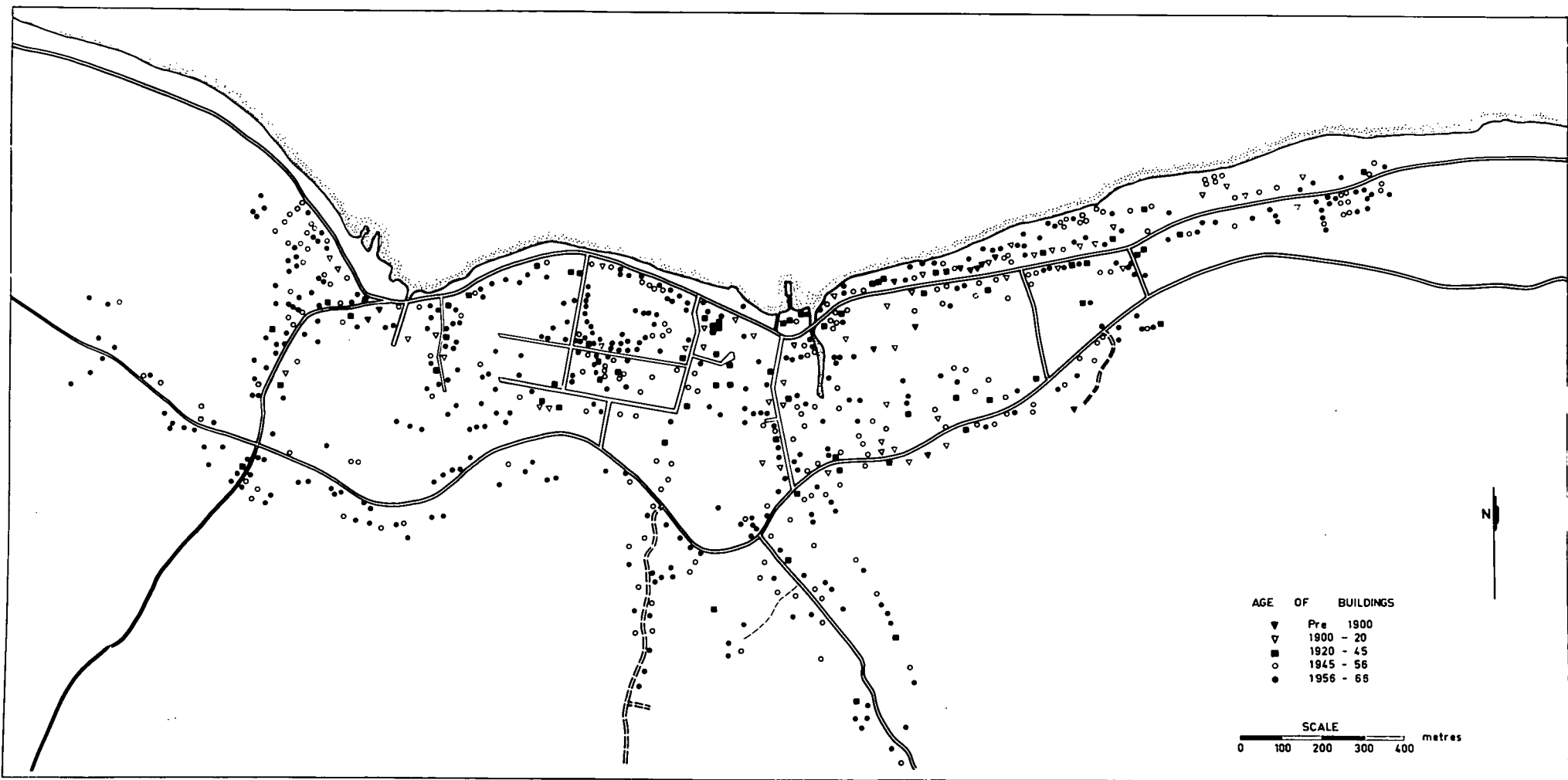


Fig. II.7 Housing Type, Materials and Condition.

Fig. II.8 Housing - Age of Construction.



traditional kikau style dwelling ranges from more than 30 percent of all dwellings in Upper Takuvaine to only five percent in Tutakimoa. Those areas of the town which have experienced the greatest influx of Outer Island migrants record the greatest number of temporary dwellings. In Tutakimoa this style of dwelling comprises almost half of all houses while in four other villages makeshift houses account for more than 20 percent of all dwellings. Figure II.8 shows the distribution of houses by age.

3. Building Materials and Housing Condition

In 1966 over 75 percent of all houses in Avarua had corrugated iron roofs while an additional 21 percent utilised the traditional method of plaited kikau. Almost 32 percent were built of hardboard walls and 18 percent asbestos sheets reflecting the role of housing loans in recent years. Milled timber (weatherboards) and concrete blocks each accounted for ten percent of houses while a medley of packing cases, coralite, sticks, flattened drums and cardboard made up the rest. Figures II.9 and II.10 show the distribution of building materials in the town in 1966. The significance of a particular building material varied according to the various parts of the town, for example, coralite was more common in the older Nineteenth Century parts of the town while temporary materials were common in those areas which had experienced large-scale settlement of Outer Island migrants. In most cases floors were constructed of wood and/or concrete (84 percent) although earthen, pebble or coral gravel floors were not uncommon in migrant housing areas.

A subjective assessment of housing condition was made based on the state and appearance of the house, condition of foundations, roofing material, floor and walls, upkeep and general suitability as a place for living in. On this basis, 39.56 percent of all houses were obviously sound and in good upkeep while an additional 38.47 were in fair condition requiring only minor repairs or maintenance. On the other hand, 21.78 percent were judged to be in poor or very poor condition.

Fig. II.9 Housing - Roofing Material.

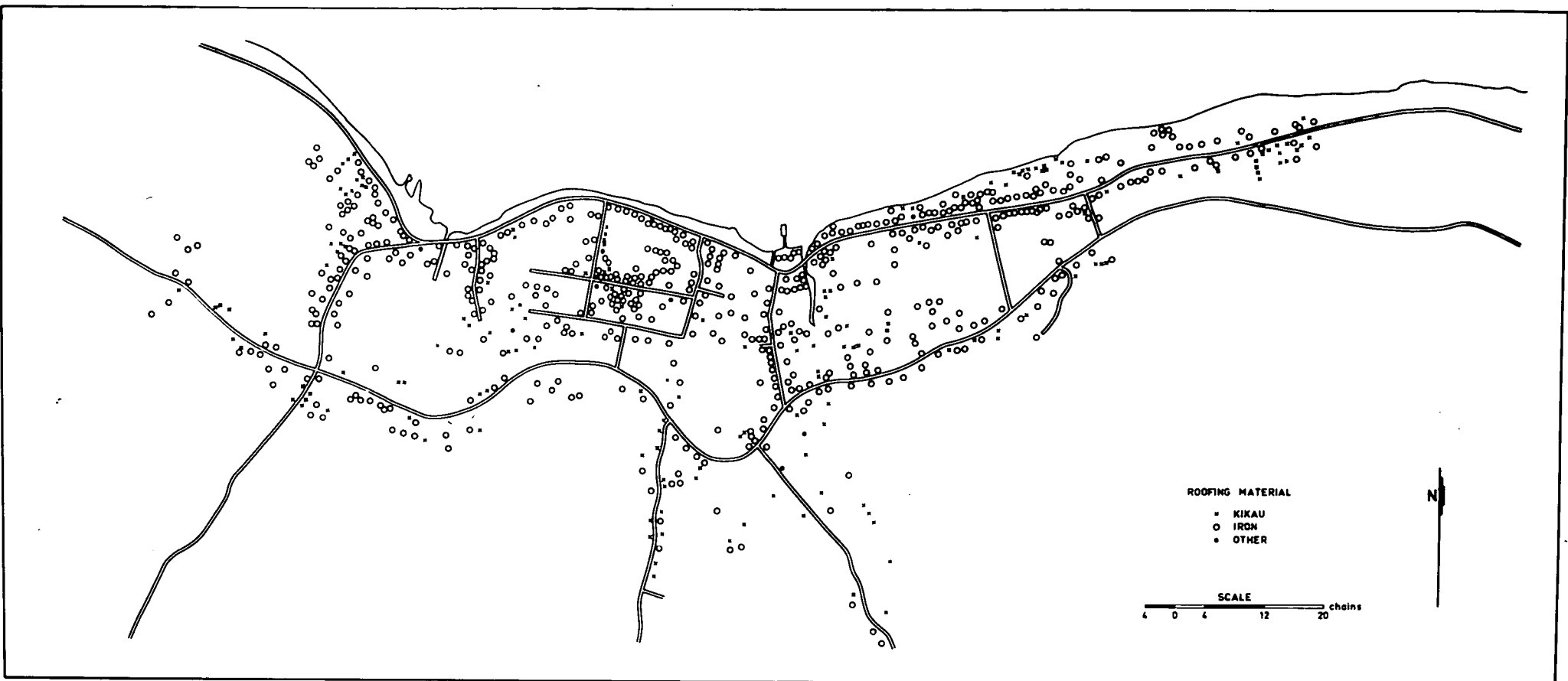
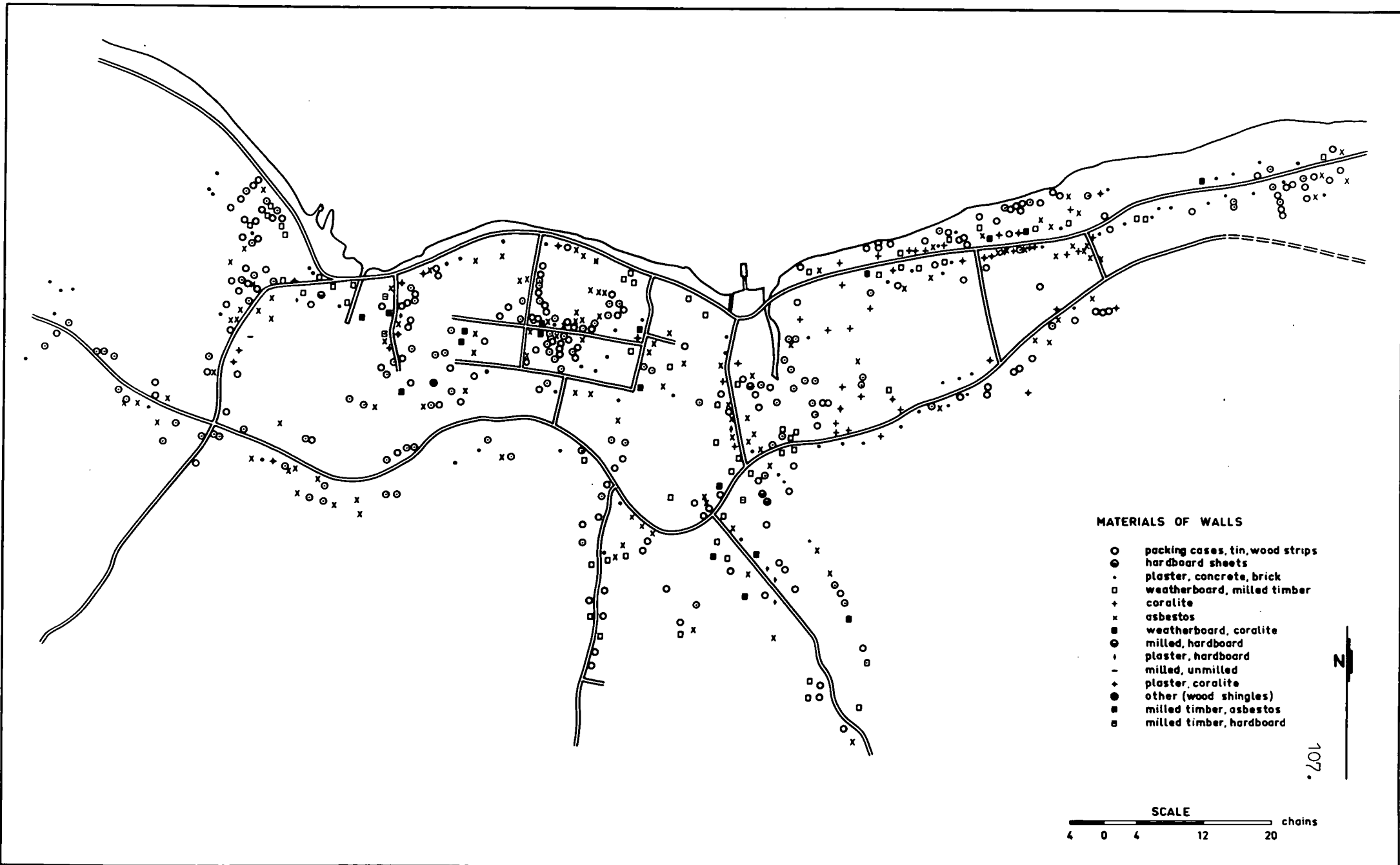


Fig. II.10 Housing - Material of Walls.



Housing condition varied within the town according to building age, immigration of landless tenants, overcrowding and subdivision of the housing site. Tutakimoa, Pué and Avatiu contained some of the worst housing concentrations in the town area. Housing quality and condition was found to correlate significantly with a number of housing and social variables, such as building materials and the possession of basic household facilities. The categories Poor and Very Poor housing correlated significantly with temporary makeshift dwellings ($p < .001$) especially in the village areas of Atupa, Ruatonga and lower Takuvaïne. Again there was a significant correlation between poor condition and building materials such as packing cases, wooden strips and iron sheets. As well as being of poor condition many of these low grade houses lacked the basic domestic and sanitary facilities. Many were without electricity ($p < .01$) and the Very Poor category showed a significant correlation with lack of toilet facilities ($p < .01$)*. In many cases the households occupants had to rely on water borrowed from a neighbour or carried from a nearby stream, particularly in the case of Upper Takuvaïne, Atupa and Tutakimoa. Bucket sanitation was common among the occupiers of houses that fell into the Very Poor category especially in parts of Tutakimoa and Upper Takuvaïne. Low quality housing in Avarua stems mainly from the migrant situation, the insecure land tenure system as well as economic factors. Squatters are usually allowed to remain on a piece of land rent free provided they abstain from erecting a permanent or substantial dwelling. The result is that many for fear of eviction erect substandard and temporary dwellings. Similarly, a member of a large land-holding lineage group may encounter considerable difficulty in obtaining permission of the widely diffused multiple owners to erect a house on the traditional land especially when shares are undefined. in many cases the demand for a more favourable portion is the cause of much intra-lineage conflict and unpleasantness. In areas such as this, an 'occupation-rights' tenure may be granted by the

* See Appendix B for information on this point.

Land Court which prevents the interference of the other shareholders and enables the occupier to 'mortgage' the land for a security loan. Failing this, security may also be obtained by leasehold.

Age was not used directly as a criterion in determining the standard or condition of a house and despite the effort and expense required to maintain a pre-war house no significant correlation was found to exist between occupied houses built before 1915 and quality. There was, however, a weak correlation between 1915-1929 and 1946-61 housing and minor repairs needed. A weak correlation was also found to exist between 1946-61 housing and Poor conditions and the correlation was slightly more significant in Pué and Tutakimoa.

It may be assumed that there would be a broad correlation between local status (Rarotongan-born head) and housing standards and to a limited extent this appears to be true from the correlation matrix. There is also a correlation between earnings and housing standards. As an indication of this it is possible to use the possession of consumer appliances (refrigerator, washing machine, radio, telephone, motor vehicle, sewing machine, motor bike). The progression from very poor quality housing to very good reveals an increasing incidence of consumer durables and household amenities (see Table 2.3). An important element in poor grade housing in Avarua is that built between 1946 and 1961 as a result of the increased immigration of Outer Islanders to the town (see Figure II.8). A significant correlation was found between substandard housing and the 1946-61 period of construction in the village areas of Tutakimoa, the Pué part of Tupapa and at Atupa. This period was prior to any significant activity by the Housing Loans Board and after 1961 better quality housing began to make an appearance in parts of the town.

Conclusions about the structure and quality of housing in Avarua must be made against the background of householder's origins, the land tenure system, the size of the household, frequency of visits of kinsfolk, the material circumstances of their arrival (if they are

TABLE 2.3

CORRELATION BETWEEN HOUSING CONDITION AND
NUMBER OF DOMESTIC FACILITIES AND CONSUMER APPLIANCES

Avarua and Selected Villages

<u>Housing Condition</u>	<u>Total Avarua</u>	<u>Tutakimoa</u>	<u>Maraerenga</u>
Very Good	.4325 p < .001	.5235 p < .001	.4060 p < .001
Good	.2498 p < .01	.3298 p < .01	.3235 p < .01
Satisfactory	-.2352 p < .01	-.3093 p < .01	-.2849 p < .05
Poor	-.2825 p < .01	-.2986 p < .01	-.2899 p < .05
Very Poor	-.2158 p < .01	-.2984 p < .01	-.2249 p < .05

Source: Avarua Housing Survey

migrants), whether they intend permanent residence in the town, as well as the general lack of any rigorous administrative supervision or checking of building design and materials and the reticulation of facilities. There exists today a fairly large amount of substandard and depressed housing which in many cases houses people of low economic status.

HOUSEHOLD SURVEY

The majority of households within the town were dependent upon a pit latrine as the main source of human waste disposal and in many cases these toilets were very poorly constructed with no adequate provision for the prevention of fly or cockroach breeding. Structures were generally located away from the dwelling and constructed of waste timber, hardboard or corrugated iron. Flush toilets were found mainly in Government and European houses together with those houses belonging to the more affluent families of the town. Almost three percent of houses were without any toilet facilities and for the most part were dependent upon the goodwill of relatives and/or neighbours. The major deficiency in domestic equipment is that more than 80 percent of all houses had no inside water supply and 55 percent no electricity. This means that the majority of households had to rely on water provided from an outside tap. In addition, very nearly 90 percent were without a hot water supply while 54 percent had no access to a hand basin. The absence of piped water inside such a large proportion of households requires further comment. In the majority of cases a single cold water tap was located within 20 yards of the main dwelling (in six percent of cases more than 20 yards away), and was normally associated with shower and washing facilities. Hot water facilities, inside toilets, baths and showers were almost exclusively concentrated in European and Government houses.

Cooking appliances combine traditional methods with cheap introduced oil or spirit burning techniques. In just over 35 percent of all households the traditional umu or earth oven formed the sole means of cooking. In 22.5 percent an umu was used in conjunction with a primus stove or small portable kerosene burner, while in almost 26 percent of

TABLE 2.4PERCENTAGE HOUSEHOLDS SHARING FACILITIES

<u>Village and Sub- Village Areas</u>	<u>Toilet</u>	<u>Shower</u>	<u>Water</u>	<u>Handbasin</u>	<u>Cooking Facilities</u>
Tupapa	10.3	17.53	27.83	9.28	6.19
Maraerenga	7.94	3.17	19.04	7.94	3.17
Lower Takuvaine	3.7	3.7	11.11	6.17	6.17
Upper Takuvaine	4.54	6.06	27.27	1.51	7.56
Atupa	20.0	20.0	20.0	6.67	6.67
Tutakimoa	27.38	42.86	35.71	17.86	11.9
Ruatonga	18.64	28.81	35.59	13.56	11.86
Avatiu	19.72	26.76	15.49	4.23	11.27
Total Avarua	14.7	17.42	23.23	5.99	8.17

Source: Avarua Housing Survey

households, meals were prepared on a kerosene range. Electric stoves were almost exclusive to European households and only accounted for five percent of all cases. Finally, almost eight percent were cooking on a primus burner alone. Almost 36 percent of households were preparing food in a separate kitchen attached to the main dwelling unit while an additional 31 percent had a separate structure outside for food preparation. In 33 percent of all dwellings, however, no separate kitchen as such exists and food is prepared in the open and either eaten *al fresco* or taken into the living quarters. The household survey also indicated the number of families sharing basic domestic facilities. Since many Outer Islanders are crowded into a number of small residential sites they are often forced to share a number of basic facilities. Table 2.4 indicates the degree to which households are sharing showers, toilet and cooking facilities. Tutakimoa shows the largest proportion sharing these facilities, almost 43 percent were sharing washing facilities, 36 percent water and more than one quarter toilet facilities. Overall, 17 and 14 percent of the town's households were reliant on shared shower and toilet facilities respectively. It has already been shown that a relationship exists between the general state of repairs of a house and its possession of basic domestic facilities and 'luxury' consumer durables. All houses at the bottom of the scale and in need of major repairs were nearly always found to be deficient in the possession of basic facilities.

Variations within Avarua

As can be seen from Table 2.5 there is a wide variation between one village area of the town and another. A complicating factor here is that rarely is a village area socially homogenous but is rather made up of a mixture of socio-economic groups. Thus Tutakimoa, for example, is comprised of a central core of crowded, substandard homes inhabited by Northern migrants, a section of high class European and Government houses and a number of more modest dwellings of Southern migrants and Rarotongans. Tupapa-Pué on the other hand combines a sharply defined

Source: Housing Survey

TABLE 2.5

POSSESSION OF FACILITIES, AVARUA HOUSEHOLDS (%)

<u>Households With</u>	<u>Tupapa-Pue</u>	<u>Maraerenga</u>	<u>Lower Takuvaie</u>	<u>Upper Takuvaie</u>	<u>Tutakimoa</u>	<u>Ruatonga</u>	<u>Avatiu</u>	<u>Atupa</u>	<u>Total Avarua</u>
Electricity	57.73	49.21	38.27	39.39	42.85	47.76	36.61	50	45.01
Inside water	18.55	19.04	23.45	12.12	26.19	20.33	11.26	33.33	19.78
Outside water (20 yards)	76.28	69.84	69.13	75.75	57.14	61.01	80.28	46.66	68.78
Hot water	10.31	4.76	12.34	7.57	20.23	6.77	8.45	16.05	10.89
No water	2.06	1.59	2.47	1.52	8.33	0	5.63	10	3.63
Flush toilet	20.62	17.46	20.98	13.63	23.8	15.25	11.26	36.66	19.06
Pit latrine	78.35	80.95	80.24	83.33	70.23	86.44	83.09	50	78.22
No toilet	0	0	0	1.52	1.19	0	2.82	6.66	2.72
Umu	29.89	44.44	40.74	46.96	27.38	37.28	35.21	20	35.75
Electric/Kero Stove	39.16	41.27	28.39	21.21	28.56	27.11	21.2	36.66	30.85
Primus	8.24	6.34	7.4	13.63	11.9	5.08	5.63	0	7.98
Umu + primus	8.24	3.17	7.4	7.57	11.9	13.55	21.2	0	9.8
Umu + other	13.4	4.76	12.34	4.54	16.66	13.55	11.27	36.66	12.7
Separate kitchen inside	45.36	39.68	33.33	22.72	33.33	37.28	35.21	33.33	35.87
Separate kitchen outside	26.8	42.85	39.5	28.78	17.85	37.28	18.3	46.66	30.49
Bath	7.21	6.34	9.87	3.03	7.14	3.39	2.82	10	6.17
Own shower	71.13	87.3	93.82	93.93	53.57	55.93	66.19	70	74.05
Own hand basin	52.57	44.44	41.97	43.93	34.52	69.49	33.8	46.66	45.37

overcrowded cluster of Pukapukan dwellings at Puē with older and more established Southern migrant and Rarotongan housing at Tupapa. Much the same could be said of the other village areas in the survey. In general terms those village areas which contained large numbers of Northern migrants among their population are the most disadvantaged in respect of social and domestic amenities.

Housing Density

Table 2.6 shows the persons per room by ethnic group and village area. Overall most migrant groups are living at close to 2.8 persons per room in comparison with a rate of only 1.87 for Rarotongan-born and 0.83 for the European population. There is some variation within the migrant community and Northern migrants, especially Pukapukans and Rakahangans have the highest persons per room rate. While the general level of housing density in persons per room is about 55 percent higher in the Outer Island migrant groups than among native-born Rarotongans, it is important to review how this comes to be so. Is it in fact a question of larger households among these migrants or smaller dwellings? Chapter III will show that the households of Northern migrants are larger than Rarotongan or Southern households. That this is the case is partly due to the numbers of visiting kin and partly to the importance of emigration for Southern-born groups. Material will be introduced to show that the reasons for a larger than average household size among Northern migrants is not attributable to higher fertility as the total fertility rate of these Islanders in 1966 was below that of Southern migrant groups. Much of the cause, therefore, can be traced to the enlargement of the household by the arrival of members of the extended family network expecting shelter and hospitality. Chapter III will indicate a high rate of compound households among Northern migrants. A second feature of importance which influences the calculation of persons per room is the number of average size rooms which each separate dwelling unit provides. An analysis of rooms per household shows that

TABLE 2.6

PERSONS PER ROOM, AVARUA VILLAGES

Source: Housing Survey

	Tupapa	Maraerenga	Lower Takuvaïne	Upper Takuvaïne	Tutakimoa	Ruatonga	Avatiu	Atupa
European	0.61	1.14	1.69	1.44	0.74	0.44	0.8	0.57
Rarotonga	1.77	1.86	1.77	2.14	2.41	1.59	2.45	1.89
Autitaki	1.96	2.15	1.97	3.5	2.91	2.23	1.5	2.28
Atiu	2.23	0.41	3.29	4.27	6.0	3.07	3.44	4
Mangaia	2.33	2.42	1.84	2.91	2.67	2.57	3.05	2.53
Mauke	1.79	2.0	3.17	2.56	2.15	1.75	5.0	2.14
Mitiaro	6.0		1.3	4.21			2.89	2.83
Manihiki	4.0	1.68	1.91	2.15	2.81	1.67	1.52	4.33
Pukapuka	3.78	2.17			1.67		1.78	4.5
Penrhyn	4.5	0.95		2.0	2.94	2.33		
Palmerston	1.86				3.8		1.8	
Rakahanga					5			
French Polynesia		4.2		1.64	5.5	3.83	1.75	
Other Polynesia			2.33				7.5	2.0
Other			1.95					

on average migrant households contain between one and 1.5 less rooms than Rarotongan households and three less than European households. Within this pattern, Southern migrants are particularly at a disadvantage (particularly Atiuans and Mitiaroans) but as they have less persons per household, housing density is not much affected.

In the households surveyed there is an average of 0.71 of a bed per person. It is obviously a highly arbitrary matter to decide as to when a bed is overcrowded, but if one accepts as an arbitrary standard two persons per bed then in Avarua there are many households in which there are more than this number of people per bed. An overwhelming majority of householders reported that they had Western-style beds although the mean number per household was only three, indicating that there were at least three or more bedrolls per household. With pressure on existing facilities and the frequent arrival of newcomers this means that there is a high probability that one would find difficulty in bedding all the occupants of a household. In most cases siblings continue to share beds with each other up until adulthood. In many cases makeshift beds are hastily constructed on the floor. Although Island houses in Avarua are on the average housing considerably large numbers of people per dwelling this can not simply be interpreted as constituting a high degree of overcrowding. Overcrowding can be defined in terms of the relationship between the number of persons occupying a dwelling and the floor area of that dwelling. Per capita floor space ranged from 29.5 to 69 square feet with significant variations by ethnic groups. The housing survey results indicate that there is pressure of numbers on available accommodation and facilities. Yet when a good deal of everyday life is lived outside the dwelling structure and when household numbers are not static, it is very difficult to assess whether overcrowding is as critical as might first appear.

With respect to per capita floor space, migrants are again somewhat disadvantaged compared to Rarotongan and European households. On an average, Northern households have 27 percent less space than

Rarotongans while Southern migrants have approximately 19 percent less. Significantly, European households enjoy the most favourable per capita floor space index, almost three times that of other Cook Island groups.

Ethnic and Spatial Variations within the Town

Table 2.7 details the differences in housing variables by ethnic status of the household head. The survey showed the mean size of dwellings in Avarua to be 540.76 square feet with a mean of 4.05 rooms and 8.53 inhabitants. Considerable variation exists however, between the various Island groups living within the town. Europeans, for example, seemed best off and enjoyed the largest dwelling size with the fewest occupants, the smallest number of persons per room and consequently a very favourable per capita floor space index. In an effort to discover the extent to which housing variables differed by the ethnic status of the head of household a correlation matrix for selected social and housing variables was assembled utilising the eight village areas of the housing survey together with additional material for Nikao and the five major ethnic groups. From an analysis of this material it became clear that migrants from the Northern Atolls were Avarua's most disadvantaged group with respect to housing and the possession of household facilities. In this case Northern migrants showed a strong positive correlation with temporary makeshift housing ($r = .5591$ $p < .001$), with housing of substandard condition ($r = .5567$ $p < .001$) and a negative correlation with dwelling size ($r = -.2953$ $p < .01$), number of rooms ($r = -.2543$ $p < .01$) and per capita floor space ($r = -.3396$ $p < .01$). In addition, dwellings occupied by this group were low on the amenity-facilities possession scale. By contrast, Southern migrant households largely occupied traditional kikau structures ($r = .6535$ $p < .001$) while Rarotongan households were more likely to be living in kikau or European style houses, much larger than Northern or Southern migrant houses. In addition, locally-born households were much better equipped physically and socially than migrant households. At the other end of the social extreme stand the houses of Europeans which are on the average much more substantial, larger, in size, housing less occupants by consequence

TABLE 2.7

Source: Housing Survey, 1965-1966.

AVARUA HOUSING SURVEY 1965-1966

Head's Birthplace	Mean Size*	Mean No. Rooms	Mean No. Occupants	Mean Room Size*	Persons Per Room	Per Capita Floor Space*
European	806.11	6.5	5.42	124.02	0.833	148.82
Rarotonga	602.56	4.74	8.87	126.97	1.869	67.93
Aitutaki	521.74	3.84	8.32	135.97	2.169	62.67
Atiu	428.69	2.89	8.55	148.22	2.957	50.12
Mangaia	432.73	3.18	8.12	136.23	2.556	53.31
Mauke	531.00	3.77	8.85	141.05	2.352	59.98
Mitiaro	468.57	2.57	10.14	182.22	3.944	46.19
Manihiki	510.30	3.93	8.39	129.84	2.136	60.78
Rakahanga	463.57	3.14	15.71	147.50	5.00	29.50
Pukapuka	443.05	2.84	8.53	155.89	3.00	51.96
Palmerston	640.63	6.75	12.62	94.91	1.87	50.74
Penrhyn	464.55	3.09	8.73	150.29	2.823	53.23
French Polynesia	576.25	3.5	10.00	164.64	2.857	57.62
Other Pacific	381.00	2.8	8.2	136.07	2.929	46.46
Other	678.50	5.83	8.17	116.31	1.4	83.08
Total	540.76	4.05	8.53	133.38	2.104	63.39

* Square feet

producing a much more favourable per capita floor space figure. Many dwellings occupied by Europeans were built in the last five years (many be the Administration) and are well equipped with domestic and sanitary equipment. Significantly almost all Europeans were renting their houses (see Appendix B).

Prestige, occupation and housing conditions have always been associated among ethnic groups in Avarua. Rented housing is very clearly of much greater importance for Europeans than it is for other groups. Within the European group itself there are, however, a number of important variations. It is only to be expected that since many Europeans have been brought to Rarotonga by the New Zealand Government or by large business concerns, they would show a high association with rented or employer-owned accommodation. The percentage living in Government-provided accommodation is very high for short-term households. On the other hand, Europeans who have taken an Island wife are predominantly occupying private houses. In many cases these were either built on the wife's land or rented from some other source.

An examination of the average number of rooms in the different sections of the town indicates that the houses of the older settled areas (Tupapa, Maraerenga, Lower Takuvaie) have on the average a significantly greater number of rooms than the areas of migrant establishment and the more recently settled edges of the town. The overall average of 4.05 (SD 2.83) is small and includes a wide range of extremes when broken down by ethnic group. European households, for example, have an average of 6.5 rooms whereas Mitiaroan households only 2.57 (see Table 2.8). Bearing in mind that many households, especially Cook Island ones, have subsidiary structures in which to prepare or eat meals or that cooking is done outdoors, then this small number of rooms can not by itself be taken as an index of overcrowding. A further indication of the relationship between the number of Islanders and the size of dwellings is found when the mean number of persons per room is examined. In Table 2.5 there is again a distinction between those parts of the town where Outer Island migrants have settled and other areas. In general it would appear that migrants are attempting to fit

TABLE 2.8

MEAN NUMBER OF ROOMS AVARUA VILLAGES

	Tupapa	Maraerenga	Lower Takuvaîne	Upper Takuvaîne	Tutakimoa	Ruatonga	Avatiu	Atupa	Total
European	6.83	14.0	5.75	9.0	5.94	9.0	5.0	7.0	6.5
Rarotonga	5.17	5.0	4.97	4.2	3.37	5.31	3.67	4.33	4.75
Aitutaki	5.09	3.0	4.71	2.0	2.56	4.33	4.0	3.5	3.84
Atiu	3.92	4.0	2.92	2.36	1.0	2.33	1.8	1.5	2.89
Mangaia	3.0	3.67	4.75	2.87	2.5	3.14	2.71	3.0	3.18
Mauke	4.8	3.5	3.0	3.83	3.71	4.0	2.0	3.5	3.76
Mitiaro	1.0		1.0	2.71			3.0	3.0	2.57
Manihiki	1.5	3.8	4.89	4.0	3.0	4.5	5.8	3.0	3.93
Pukapuka	2.38				4.0		4.5	2.0	2.84
Penrhyn	2.0	6.0		4.0	2.83	3.0			3.09
Palmerston	14.0	20.0			2.5		5.0		6.75
Rakahanga					3.14				3.14
French Polynesia		2.5		5.5	2.0	3.0	4.0		3.5
Other Polynesia		3.	3.0				1.0	6.0	2.8
Other			5.83						5.83
Total	4.59	4.6	4.53	3.5	3.8	4.12	3.41	3.59	4.05

Source: Housing Survey

a larger number of persons into houses than either Rarotongans or Europeans. With particular ethnic groups there is also variation within the town with regards most housing variables. The size of European houses, for example, varied from a mean of 1,600 square feet in Maraerenga to only 690 square feet in Avatiu. Likewise, Rarotongan houses ranged in size from 662.89 square feet in Maraerenga to almost half this figure in Tutakimoa.

HOUSEHOLD AND DEMOGRAPHIC STRUCTURE

THE NATURE OF HOUSEHOLDS

Household structure is a complex phenomenon in Avarua reflecting among other things ethnic differences in the population and the selective process of inter-Island migration and emigration to New Zealand. Differences in household size and structure must therefore be viewed against the background of the various groups involved. There is, for example, a contrast between Northern migrants who are to a large extent engaged in a back-and-forth movement between atoll village and Avarua and Southern migrants who are involved in the preliminary stages of a movement to New Zealand. European migrants who have married local Cook Island girls also present a distinctive picture. The size and complexity of Avaruan households reflects this migration situation. The extending of accommodation and hospitality to relatives and friends often results in large compound households. Frequently little prior notice is given of an arrival other than a brief telegram a day or so before the arrival of one of the inter-Island trading vessels. In a survey of the village areas of Takuvaine, Tutakimoa and Avatiu-Atupa*, three kinds of households were distinguished: single person households; nuclear households consisting of father, mother and their dependant children (including feeding children) and the extended or compound household which includes other related or unrelated persons in addition to a nuclear family. Households exhibit wide variation in their composition. In 1967 barely 26 percent were made up of a single family consisting of father, mother and their children while a little over two-thirds were of the compound or extended type (Table 3.1). The proportion of nuclear families varies according to ethnic origin. Rarotongan households had the highest nuclear family rate, almost 40 percent excluding single member households, whereas in Northern migrant households

* See Appendix A for a discussion of this survey.

TABLE 3.1HOUSEHOLD COMPOSITION THREE AVARUA VILLAGES 1967

Birthplace Head	Number	<u>HOUSEHOLDS</u>		
		Single Member	Nuclear	Compound
Rarotonga	118	12	47	59
Aitutaki	46	4	9	33
Mangaia	44	4	11	29
Atiu	46	5	10	31
Mauke	26	4	6	16
Mitiaro	15	1	3	11
Manihiki	37	3	4	30
Rakahanga	5	-	-	5
Palmerston	5	-	-	5
Pukapuka	5	-	-	5
Penrhyn	7	-	1	6
French Polynesia	5	-	-	5
Other	4	1	-	3
European	26	3	10	13
Total	389	37	101	251

	(%)			
	Number	Single Member	Nuclear	Compound
Rarotonga	118	10.17	39.83	50.00
Southern Group	177	10.17	22.03	67.79
Northern Atolls	59	5.08	8.47	86.44
European	26	11.54	38.46	50.00
Total*	389*	9.51	25.96	64.52

* Includes French Polynesians and others.

Source: Social Survey of Takuvaine, Tutakimoa, Avatiu and Atupa Districts 1967.

only eight percent were of this type. The position of European households is interesting and the high degree of intermarriage with Cook Island groups has produced a large proportion of compound households. The ten nuclear households in this group were by comparison almost exclusively European/European households.

Traditionally, married sons would often bring their wives to live with their father's household (Beaglehole, 1957: 163). Today, however, it is more common for young couples to live 'uxorilocally' by occupying their wife's land or 'virilocally' by living on the husband's land. In both cases the desire is normally to set up a separate household rather than occupy their parents dwelling unit. Despite this desire, in many cases cooking and food preparation facilities are shared in common with older parents. The lack of any building and housing regulations on Rarotonga has made it relatively easy for such a pattern of settlement to develop. By the migration of kinsfolk further subdivision simply takes place on the original housing plot, additional dwellings being built alongside or behind existing ones. This sort of residential development is illustrated in Figure III.1 and very much exemplifies the growth pattern of the town - a process of infilling and consolidation of small open spaces around existing dwellings. Rarely are additional facilities provided for sewerage or water and existing facilities are shared, either by an extension of a hose and bucket or by making all facilities communal.

The mean size of Avaruan households is naturally enough closely related to structural complexity. Table 3.2 details the ethnic variations in mean household size for all dwellings in Avarua. This Table also shows the considerable variation that exists within the town itself. In some cases these differences are considerable. The mean household size of Aitutakian households, for example, ranges from 10 in Tupapa to only six in Avatiu, while Mitiaroans range from more than 11 in Upper Takuvaine to six in Tupapa.

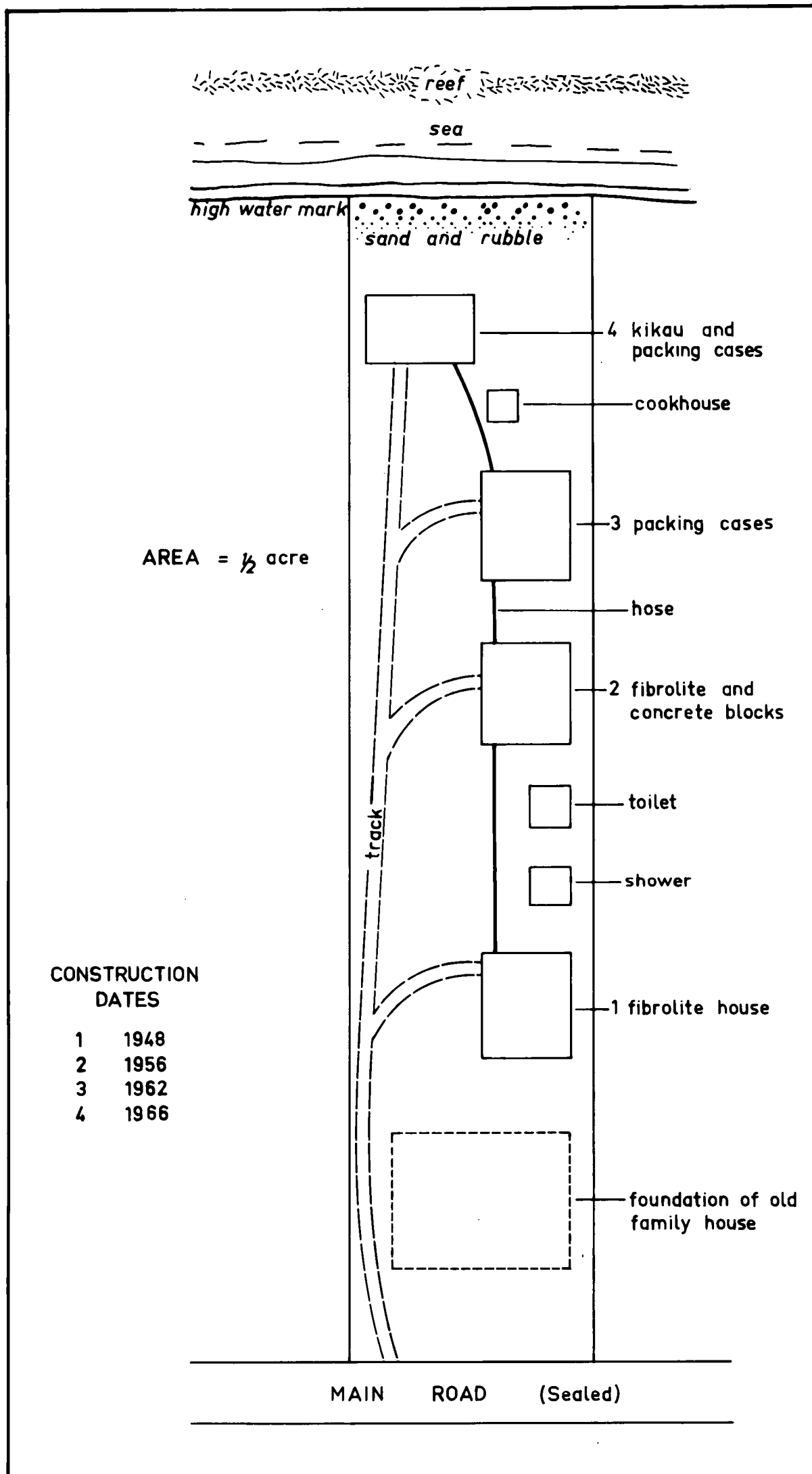


Fig. III.1 Typical Residential Development - Avarua.

TABLE 3.2

MEAN NUMBER OF OCCUPANTS PER DWELLING, VILLAGE AREAS, AVARUA

Household Head	Tupapa	Maraerenga	Lower Takuvaine	Upper Takuvaine	Tutakimoa	Ruatonga	Avatiu	Atupa	Total
European	4.16	16.0	9.7	13.0	4.37	4.0	4.0	4.0	5.42
Rarotonga	9.16	9.32	8.81	9.0	8.12	8.42	9.0	8.22	8.87
Aitutaki	10.0	6.44	9.38	7.00	7.44	9.66	6.0	8.0	8.33
Atiu	8.75	9.27	9.58	10.09	6.0	7.16	6.2	6.0	8.55
Mangaia	7.0	8.88	8.75	8.37	6.66	8.07	8.28	7.0	8.12
Mauke	8.6	7.0	9.5	9.83	3.0	7.0	10.0	7.5	8.85
Mitiaro	6.0		13.0	11.42			8.66	8.5	10.14
Manihiki	6.0	6.4	9.33	8.6	8.42	7.5	8.8	13.0	8.39
Pukapuka	9.0				6.66		8.0	9.0	8.53
Penrhyn	9.0	13.0		8.0	8.33	7.0			8.73
Palmerston	26.0	19.0			9.5		9.0		12.62
Rakahanga					15.74				15.71
French Polynesia		10.5		9.0	11.0	11.5	7.0		10.0

Source: Housing Survey

Northern Atoll Migrant Households

Islanders from the Northern Atolls appear, on the average to have substantially larger households than other groups. The mean size of Northern households was found to be 40 percent higher than Southern households (see Table 3.1). Of the 59 Northern households visited in the three village survey, only five were single family households while three were single member units. Additional kinsfolk were present in 51 households. Average sibling size was only 4.84, somewhat less than Rarotongan and Southern households and reflects the fact that Northern migrants are still in the process of active migration to Rarotonga. Hence, families are often split up, wives and children remaining in the Atolls for some time before joining their spouse on Rarotonga. Compound households were made up of married or unmarried siblings of either partner together with their children, while grandchildren and cousins were also noticeable by their presence (Table 3.3.). The extended nature and size of Northern households in Avarua is explicable in terms of their migration to Rarotonga. The presence of temporary visitors in the household is much more a significant feature of Northern households and there is a continuous drift of cousins, uncles, aunts, nephews and others to stay for short periods before returning to the home village.

Southern Migrant Households

Southern migrant households in Avarua lie somewhere between Rarotongan and Northern households in that they have a much larger proportion of nuclear households than Northern migrants but a lower proportion of compound households. In 1967 just in excess of two-thirds of all Southern households supported relatives and friends in addition to the nuclear family unit, the most common combination being brother, sister (and family) and old parents and grandparents. Many of these additional members were in the process of joining relatives already in New Zealand or intending to emigrate sometime in the not too distant future.

TABLE 3.3ADDITIONAL MEMBERS IN COMPOUND HOUSEHOLDS

	<u>Rarotonga</u> ¹	<u>Southern Groups</u> ²	<u>Northern Atolls</u> ³	<u>European</u> ⁴
Old Parents	19	24	4	6
Brother/Sister + Family	54	58	26	1
Grandchildren	6	18	14	-
Grandparent	-	22	-	1
Cousin	11	13	14	5
Uncle/Aunt	6	9	4	-
Nephew/Niece	-	-	8	1
Other	16	22	8	3
N	68	120	51	13

1. Includes 32 cases of more than 1 set.

2. Includes 50 cases of more than 1 set.

3. Includes 25 cases of more than 1 set.

4. Includes 2 cases of more than 1 set.

Source: Social Survey of Three Villages.

Rarotongan Households

Among Rarotongans the commonest type of household is the compound form accounting for 50 percent of all households visited. The remaining 50 percent were nuclear or single member in composition. Table 3.3 records the additional persons resident within these households. Most are close relatives of the household head or his wife, with a brother and/or sister (and family) figuring most prominently. Many of the Rarotongan households supporting additional kin are examples of Rarotongan/other Cook Islander unions and thus experience the same processes typical of migrant households. Children were present in all but a handful of these households and the mean sibling size was 5.2 comparatively higher than for other groups.

There seems little doubt that the extended or compound family household is less significant today than previously, especially among Rarotongan groups. The large extended family was most probably more ideally suited to a subsistence mode of living than is the nuclear household. The rise of nuclear family units, especially among Southern Islanders, would therefore seem to be a direct result of emigration to New Zealand and the switch to a livelihood based more on wage employment and commercial agriculture.

Location of Offspring and Siblings

Table 3.4 shows that most households in the three villages have children or siblings resident in New Zealand or in the case of Outer Islanders in the home Island. Almost half of all households have children resident in New Zealand while 15 percent of Outer Island households had children back in the home village. The very high proportion of households with children who were separated from their parents, either in New Zealand or in the home village is very significant. In addition to having offspring located in New Zealand and/or other Islands in the group, 62 percent of all households had brothers and/or sisters who had migrated to New Zealand or who were still in the home village. This latter point was more characteristic of Rarotongan and

TABLE 3.4

HOUSEHOLDS WITH CHILDREN AND SIBLINGS
IN HOME ISLAND AND/OR NEW ZEALAND

(%)

Birthplace	Number of Households	Children in N.Z.	Children in Home Village	Children in Other Island	Siblings in N.Z.	Siblings in Home Village	Siblings in Other Island
Rarotonga	106	46.23	-	-	75.47	-	-
Southern Group*	159	47.79	14.46	5.03	61.06	54.72	8.81
Northern Atolls	56	46.43	19.64	8.93	37.5	67.86	10.71
Total	321	47.35	15.25	16.73	61.68	59.19	11.21

* Excludes Rarotonga

Note: Table excludes single person households.

Source: Social Survey of Three Villages

Southern households than for Northern migrants. The implications of such a dispersal of kinsfolk and offspring is of course far-reaching and serves to bind home village, Avarua and New Zealand together into a web of relationships and obligations. Further, the large number of households with dispersed kinsfolk highlights an important characteristic of household structure, that is, that Avarua contains a sizeable permanently-settled and long established migrant population onto which a mobile and constantly shifting section is grafted.

Ethnic Exogamy

Intermarriage has always occurred fairly frequently between migrants and the local population on Rarotonga and this has been one way in which landless migrants have been absorbed into the land-owning groups on the Island. No real social problem is presented in the absorption of immigrant groups into Rarotongan society. Friction or prejudice is largely absent, perhaps due to the similarity in traditions, customs and general background of the groups involved. Despite this, the Outer Islander may often be referred to as manuiri (immigrant) even though he may have been born on Rarotonga, but of migrant parents. The evidence relating to intermarriage between persons born on different Islands or of different ethnic background indicates the significance of exogamy. Among all such unions the headship is normally invested in males and the 'difference' in the marriage partner recorded in Table 3.5 almost invariably refers to females. Ethnic exogamy is of some importance for most groups in Avarua despite parental influence on the choice of marriage partner. Migrants from the Northern Atolls (particularly Pukapukans, Penrhyn Islanders and Manihikians) record the highest rates of exogamy. Parental control over their children's behaviour is known to be less strong among these groups*. The 'other' category in Table 3.5 (containing spouses of Niuean, Samoan, French Polynesian, Fanning Island and Chinese descent) is also significantly

* A fact which may help explain the higher petty crime and illegitimacy rates amongst migrant groups... see pages 168-176 and Chapter IV.

TABLE 3.5

INTERMARRIAGE RATES

Source: Survey of villages of Takuvaine,
Tutakimoa, Avatiu-Atupa 1967.

Race of Household Head 1967

	Rarotonga	Aitutaki	Mangaia	Atiu	Mauke	Mitiaro	Manihiki	Pukapuka	Rakahanga	Penrhyn	Palmerston	Other	European	Total
Total households	118	46	44	46	26	15	37	5	5	7	5	9	26	389
With no spouse present	12	4	4	5	4	1	3	0	0	0	0	1	3	37
%	10.15	8.7	9.1	10.9	15.3	6.67	8.1	0	0	0	0	11.1	13.05	9.51
Resident spouse of same race	63	25	30	31	18	12	18	2	4	1	4	4	7	219
%	53.4	54.3	68.2	67.4	69.4	80.3	48.6	40	80	14.3	80	44.4	25.45	55.75
Resident spouse of different race	43	17	10	10	4	2	16	3	1	6	1	4	16	133
%	36.4	37	22.7	21.7	15.3	13.3	43.25	60	20	85.7	20	44.5	61.5	34.2
<u>Birthplace of Spouse</u>														
Rarotonga	63	4	5	3	2	2	4	2				4	8	97
Aitutaki	7	25		2									4	38
Mangaia	6	0	30	2			3						1	42
Atiu	4	1	1	31									1	38
Mauke	2				18		1							21
Mitiaro	2					12								14
Manihiki	4	2	2	2	1		18		1	3			1	34
Pukapuka	2							2						4
Rakahanga	0								4					4
Penrhyn	0						4			1	1	1	1	7
Palmerston	1						1				4			5
Other	14	6	1		1		1			1		4		28
European	2	4	1	1			2	1		2			7	20
	156	42	40	41	22	14	34	5	5	7	5	8	23	133.

intermarried with local groups, while Europeans have the second highest exogamy rate (exceeded only by Penrhyn Islanders), reflecting the numbers of young males who have married local girls. The ethnic character of the exogamous mates of Rarotongans throws further light on the nature of inter-group relations. Among the 43 non-Rarotongan spouses in this category the 'other' category ranked most important reflecting the greater mobility of Rarotongans about the Pacific. After their own Island most Southern migrants showed a greater preference for Rarotongan spouses than for Islanders from one of the other Southern Islands or from the Northern Atolls. By comparison, Northern migrants had a higher proportion of unions with other Northern migrants than they did with Rarotongans indicating their relatively recent presence on Rarotonga and the close links between a number of Northern Islands.

Figures for marriages which took place to Islanders resident on Rarotonga between 1966 and 1970 add further support to the above conclusions (Table 3.6). Northern migrants and Europeans had very high exogamy rates. Unions contracted across ethnic lines were very frequent for most groups in this period and the marriage records reveal that 71 percent of all marriages that took place in these five years were across ethnic boundaries. Exogamy rates calculated from marriages after 1966 seem to indicate a growing predilection for a spouse outside one's own ethnic or Island group. Inter-marriage with a Rarotongan-born spouse seems to be on the increase. Undoubtedly the choice of a marriage partner is influenced by the small number of unattached young people from the same village in Rarotonga. Also the figures do not tell us what proportion of the Rarotongan-born spouses are in fact children of Outer Island migrants themselves.

The considerable movement of Outer Islanders to Rarotonga and the intermarriage that has taken place has brought about a situation whereby the large majority of residents on Rarotonga now possess land rights on one or other of the Outer Islands.

TABLE 3.6

Source: Registrar of Marriages, Rarotonga.

MARRIAGES 1966-1970

Race of Household Head

	Rarotonga	Aitutaki	Mangaia	Atiu	Mauke	Mitiaro	Manihiki	Pukapuka	Rakahanga	Penrhyn	Palmerston	Other	European	Total
Total	51	11	11	8	5	3	2	8	3	2	2	1	17	124
Spouse of same race	27*	2	1	1	1	2	1	1	0	0	0	0	0	36
%	53	18.15	9.75	12.5	20	66.6	50	12.5	0	0	0	0	0	29
Spouse of different race	24	9	10	7	4	1	1	7	3	2	2	1	17	88
%	47	81.75	90.25	87.5	80	33.3	50	87.5	100	100	100	100	100	71
Rarotonga	27*	5	8	5	1		1	4	1	2	1		10	65
Aitutaki	4	2	1		1				1					9
Mangaia	8	1	1	2	2				1					15
Atiu	5	1		1				2						9
Mauke	2		1		1			1					3	8
Mitiaro	2					2						1	2	7
Manihiki	1	1					1			1			1	5
Pukapuka								1						1
Rakahanga	2													2
Penrhyn		1											1	2
Palmerston						1								1
Other														0
European														124

* includes 1 Rarotongan spouse born in NZ

The Role of Migration

The 1966 population census indicates almost 41 percent of the population of Avarua to have been born outside Rarotonga on one of the other Cook Islands. A much larger proportion of the town's population, however, can lay claim to Outer Island status by virtue of their parents or grandparents birthplace even though they themselves may have been born on Rarotonga. The housing survey of Avarua villages (excluding Nikao) revealed that only 32 percent of all household heads were Rarotongan-born. This means that more than 62 percent could claim migrant or foreign-born status (see Table 3.7). As illustrated earlier (in Chapter II) migration is very much the key factor in Rarotonga's demographic and social history and today remains one of the main determinants of Avarua's urban ecology.

A broad distinction is immediately possible between those migrants who are permanent residents and those whose presence in the town is of a temporary nature. A tradition of movement to Avarua for many groups is of very long standing duration. Many Outer Islanders, especially those from the larger Southern Islands, moved to Rarotonga as early as the 1880s to engage in a wage economy. It is only since the passing of World War II, however, that migrants have begun to settle permanently in any large numbers on the Island. Table 3.8 lists information relating to the length of residence in Rarotonga of 236 Cook Island household heads resident in Takuvaine, Tutakimoa and Avatiu-Atupa together with 65 Europeans working within the town. It is clear from these figures that most migrants have moved to Rarotonga since the mid 1950s.

As has already been indicated, the presence of many Outer Islanders in Rarotonga stems from the policy of labour recruiting, the greater economic and social attractions of the Island as well as administrative and medical centralisation. In post-war years the growth of a sizeable Cook Island community in New Zealand has also greatly influenced the migration rate to Rarotonga - the town serving as a preliminary stop-over point for intending emigrants.

TABLE 3.7BIRTHPLACE OF HOUSEHOLD HEADS, AVARUA 1966

<u>Birthplace</u>	<u>Number</u>	<u>%</u>
Rarotonga	177	32.123
Aitutaki	43	7.804
Atiu	65	11.797
Mangaia	51	9.256
Mauke	34	6.171
Mitiaro	14	2.541
Manihiki	43	7.804
Pukapuka	19	3.448
Penrhyn	11	1.996
Palmerston	6	1.089
Rakahanga	7	1.270
French Polynesia	8	1.452
Other Pacific	3	0.544
Other	2	0.363
European	36	6.533
Not Specified	32	5.808
Total	551	99.999

	<u>Number</u>	<u>%</u>	<u>1966 Birthplace¹ of all Residents</u>
Rarotonga	177	32.123	51.5
Southern	207	37.568	26.75
Northern Atolls	86	15.608	14.23
European	36	6.533	5.57*
Other	13	2.359	1.95
Not Specified	32	5.808	-

¹ Cook Islands Population Census, 1966-1968

* Metropolitan-born.

Source: Housing Survey 1966-67.

TABLE 3.8

Source: Social Survey of Three Villages; European Employment Survey.

DURATION OF RESIDENCE IN RAROTONGA

Birthplace

	Aitutaki	Mangaia	Mauke	Atiu	Mitiaro	Manihiki	Rakahanga	Pukapuka	Palmerston	Penrhyn	European
More than 20 years	7	11	4	6	4	5	-	-	-	-	4
10-20 years	16	9	3	13	-	6	4	2	2	1	8
5-10 years	14	18	10	9	8	11	-	2	2	2	10
0-5 years	9	6	8	18	2	15	1	1	3	2	43*
Not stated	-	-	1	-	1	-	-	-	-	-	-
Total	46	44	26	46	15	37	5	5	7	5	65

* includes 1 N.Z. Maori

	(%)					
	More 20 yrs	10-20 yrs	5-10 yrs	0-5 yrs	Not stated	Total
Southern Born	18.08	23.16	33.33	24.29	1.13	177
Northern Atolls	8.47	25.42	28.81	37.29	-	59
European	6.15	12.31	15.38	66.15	-	65
Other	30.0	30.0	20.0	20.0	-	10
Total Cook Islanders	15.68	23.73	32.21	27.54	0.85	236
Total All Groups	14.15	21.54	28.29	35.37	0.65	311

The desire to engage in some form of wage labour attracted many Manganians, Aitutakians and Atiuans to Rarotonga in the late Nineteenth Century. The distribution of many of these Islanders reflected employer's needs and Southern migrants embraced labour contracts with a passion unequalled by other groups. After the cessation of recruiting to Makatea in 1955 many Southern Islanders settled permanently on Rarotonga. In 1967, 29 percent of all Southern household heads in the three village survey indicated that they had moved to the town after a period of labour indenture on Makatea (see Table 3.9). Most informants stressed the lack of opportunity and dullness of their home village area and the problems of re-adjustment after a protracted period of absence. Many of these migrants, once established on Rarotonga had systematically encouraged other members of their family to join them. An even larger proportion of these households included a member who had worked at some time on Makatea. More than 42 percent of all Southern households had in this way been exposed to a wage economy.

Among Southern migrants almost one-fifth had been resident in the town for over 20 years and many of these households involved persons who had moved to Rarotonga as a result of some form of employment either within the Group or on neighbouring Islands. Among the Manganians (the longest established migrant group in the town) all the cases of households that had been more than 20 years in Avarua involved persons who had some experience of labour contract work outside the Group. The relative importance of this sector reflects the preference of Manganians for wage labour. Also significant among Southern migrants are the large number of household heads who moved to Avarua during and immediately after the period of Makatea labour recruiting. Almost 35 percent of Aitutakians and 28 percent of Atiuans indicated that they had migrated to Rarotonga during this period. Finally, over 57 percent of the Southern-born community had been present in the town for less than ten years indicating the significance of recent migration for these groups. Of these households, many had come to Rarotonga at the behest of relatives

TABLE 3.9

HOUSEHOLDS WHICH MOVED TO AVARUA
PRIMARILY AS A RESULT OF LABOUR
CONTRACT ON MAKATEA

<u>Birthplace Head</u>	<u>Number</u>	<u>%</u>	<u>Households who number a member who worked on Makatea</u>	<u>%</u>
Aitutaki	11	26.19	16	38.09
Mangaia	13	32.5	21	52.5
Atiu	8	19.51	13	31.71
Mauke	12	54.54	14	63.64
Mitiaro	2	14.28	3	21.43
Manihiki	5	14.71	8	23.53
Rakahanga	1	20.0	1	20.0
Pukapuka	11	20.0	1	20.0
Palmerston	-	-	-	-
Penrhyn	-	-	-	-
Southern Group	46	28.93	67	42.14
Northern Atolls	7	12.5	10	17.86
Total	53	24.65	77	35.81

Source: Social Survey of Three Villages.

and kinsfolk already established on the Island, while an equally significant proportion indicated that their inter-Island migration was merely the first step in a movement that would eventually take them to New Zealand.

By way of contrast, the Northern Atoll community in Avarua is a much more recently-established one. Only in the case of Manihikians was migration found to be of long-standing duration. Unlike other Northern migrants, Manihikians began to settle on a permanent basis at least as early as 1905 when Tupou Taroua built the first Manihikian house in Tutakimoa. Other migrants remained simply 'birds of passage' and it was not until after 1945 that Northern Atoll migrants began to settle in large numbers. Although the numbers included in the survey are relatively small, they are suggestive of the considerable movement of Northern migrants to the town that took place in the years after the war, and more especially since 1960. Several factors may be suggested as being closely associated with the migration of Northern migrants to the town. There are general considerations, such as the considerable improvement in transport facilities that followed the conclusion of the war, as well as a desire to earn money and the attraction of the 'bright lights' especially for the younger people. In addition, many have come to visit relatives, others for medical treatment or for further training while the growth of a large Atoll community in New Zealand has also encouraged migration.

Adult Europeans in Avarua may also be regarded as either permanent - that is those who intend to remain indefinitely in Rarotonga - or those whose presence is of a temporary nature. Temporary migrants are usually persons who have been brought to the Island by the Cook Island or New Zealand Governments or by some international or independent authority and who after completing a specific period of service can expect to be repatriated. Information relating to these communities is given in Table 3.10. Almost 42 percent of all Europeans surveyed could be classified as permanent residents and the large majority of these migrants had been resident on the Island for more than five years. Their

TABLE 3.10

EUROPEAN HOUSEHOLDS IN AVARUAA. Nature of Households

	<u>Total</u>	<u>Cook Island Spouse</u>
Permanent Households	27	20
Temporary	36	1
Undecided	2	0
Total	65	21

B. Duration of Residence

<u>Households</u>	<u>More 20 years</u>	<u>10-20 years</u>	<u>5-10 years</u>	<u>0-5 years</u>	<u>Total</u>
Permanent	4	8	7	8	27
Temporary	0	0	2	34	36
Not Stated	1	0	0	1	2
Total	5	8	9	43	65

C. Employment Status

	<u>Permanent</u>	<u>Temporary</u>	<u>Total</u>
General Administration	10	17	27
Industry/Trading Stores	7	4	11
Entrepreneurs	5	-	5
Teaching	-	4	4
Health/Medical	-	4	4
P.W.D.	4	7	11
Other	1	-	1
Total	27	36	65*

* includes 2 not stated

D. Birthplace

	<u>Permanent</u>	<u>Temporary</u>	<u>Total</u>
New Zealand	13	26	39
U.K.	6	9	15
U.S.A.	3	0	3
Australia	2	1	3
Other	4	1	5
Total	28	37	65

Source: Avarua Employment Survey.

distribution by employment status suggests a much less administrative bias than is the case for temporary migrants and this is also paralleled by a wider range of place of origin. Even so, it is perhaps surprising at the large number in administrative jobs since expatriate administrators are normally on a short-term basis. This possible anomaly is accounted for by the large number of former short-term expatriates who have married local girls and elected to remain more or less permanently on the Island. This together with a small number of expatriate officers who have taken defacto local wives and consistently renewed their employment contract, and a handful of long-established traders, accounts for over 90 percent of the permanent European community.

Temporary European migrants include the various administrative heads of Government departments, technical and skilled personnel in the Public Works Department as well as medical and educational workers, and this is reflected in their predominantly New Zealand origin, their concentration in the Administrative sector and their limited length of stay. By contrast to the much longer established permanent sector, more than 94 percent of short-term migrants had been in the town for less than five years.

One of the most notable features of Rarotongan social organization is the very mobile nature of society. Most households include members who have some migrational experience. It has already been suggested that migration is unusually selective of those households which include persons who have previous experiences of living away from their home village. Mention has already been made of the large number of households with children and/or siblings resident in New Zealand or back in the home village. Table 3.11 further develops this point. In 61 percent of the cases the household head had visited or lived on another Island in the Group (excluding the Island of birth and Island of present residence) and just over one-fifth of all household heads had either lived in or visited New Zealand. For particular Island groups the proportions are sometimes even higher. The number of Mauke

TABLE 3.11

MIGRATIONAL HISTORY BY ETHNIC GROUP

PROPORTION OF HOUSEHOLDS WITH MEMBERS ABSENT OR WITH MIGRATION EXPERIENCE

(%)

Birthplace Head	Number	<u>Head of Household</u>		<u>Head's Children</u>		<u>Head's Siblings</u>	
		Lived on other Islands in Group	Been to N.Z.	Living on another Island	Living in N.Z.	Living on another Island	Living in N.Z.
Rarotonga	106	66.04	18.87	-	46.23	16.98	75.47
Aitutaki	42	52.38	28.57	-	28.47	-	64.28
Atiu	41	68.29	21.95	24.39	56.09	36.58	63.41
Mangaia	40	60.0	25.0	5.0	55.0	65.0	50.0
Mauke	22	72.72	40.91	13.64	63.63	4.55	68.18
Mitiaro	14	57.14	7.14	7.14	42.86	21.43	50.0
Manihiki	34	41.17	11.76	-	44.12	-	23.53
Rakahanga	5	60.0	20.0	-	40.0	-	60.0
Pukapuka	5	80.0	20.0	-	20.0	-	40.0
Palmerston	5	60.0	-	-	100.0	-	60.0
Penrhyn	7	71.43	-	-	100.0	-	57.14
Others	4	50.0	25.0	-	75.0	50.0	100.0
Total*	321	61.37	20.87	4.98	47.35	19.63	61.68

* Excludes single member households and European and French Polynesian households.

Source: Social Survey of Takuvaone, Tutakimoo, Avatiu and Atupa 1967.

respondents who had experience of other Islands and/or New Zealand conditions is surprisingly high. The large number of Northern migrants who had experience of other Islands is explained by the fact that four of the Pukapukans had visited Nassau while three of the Rakahangans had lived on Manihiki.

DISTRIBUTION OF SOCIO-ECONOMIC CHARACTERISTICS

Demographic Structure

(i) Ethnic Structure

Table 3.12 shows the percentage of household heads and total population in Avarua belonging to the four main ethnic groups. It emphasises that, in many villages Rarotongans are outnumbered by migrants from the Southern Islands and Northern Atolls. In fact, Rarotongans only outnumber other Cook Islanders in Lower Takuvaine and Nikao and are heavily outnumbered in Tutakimoa, Upper Takuvaine, Maraerenga and Avatiu. The villages where their proportion is least - Tutakimoa, Upper Takuvaine, Avatiu and Nikao, are those where migrant groups, especially Outer Islanders and European New Zealanders have settled. Migrants from the Northern Atolls (especially Manihiki, Rakahanga and Penrhyn) are important in Tutakimoa as are Pukapukans in the Pué area of Tupapa. Europeans are most important in Tutakimoa and outside the town proper in the select European housing areas of Nikao. Migrants from the five major Southern Islands form the dominant regional group in four villages (Maraerenga, Upper Takuvaine, Avatiu and Atupa) although only as a composite and no single group individually approaches the number of Rarotongans in these areas. A significant feature of Avarua's ethnic structure is also revealed by Table 3.12. This is the large proportion of village residents actually born on Rarotonga although of Outer Island parents or of a mixed ethnic union. Such a situation indicates the significance of family migration and the intermarriage of migrants with local groups. Hence in all villages, except Tutakimoa and Nikao, the locally-born element outnumbers all other groups.

TABLE 3.12

BIRTHPLACE OF AVARUAN POPULATION

(%)

<u>Village Areas</u>	<u>Household Heads</u>				<u>Total Population</u>				
	Rarotonga	Other Southern	Northern Atolls	European	Rarotonga	Other Southern	Northern Atolls	N.Z.*	Other
Tupapa	43.29	30.92	18.5	6.18	57	23.15	16.9	2.68	0.3
Maraerenga	30.15	49.19	11.11	1.59	57	27.5	8.46	5.53	1.51
Lower Tukavaine	45.67	29.61	11.11	4.93	56	29.4	7.16	3.67	3.77
Upper Tukavaine	22.72	59.07	9.08	1.51	53.5	30.3	9.7	1.62	4.88
Tutakimoa	9.52	27.37	40.46	19.04	38.1	18.3	33.7	6.55	3.35
Ruatonga	44.06	40.67	5.08	1.69	56.5	29.5	11.92	1.04	1.04
Avatiu	29.58	30.99	12.68	4.23	61.3	23.95	7.75	2.12	4.75
Atupa	30	33.3	6.66	13.33	60	23.4	9.23	7.37	0
Nikao	34.9	16.9	9.44	22.35	46	16.83	13.3	21.08	2.75
Total Avarua (minus Nikao)	32.12	37.57	15.61	6.53	51.5	26.75	14.23	5.57	1.95

* includes some Cook Islanders born in N.Z.

Source: Social and Housing Survey of Avarua 1966/67; 1966 Population Census.

(ii) Population Distribution

Figures III.2 and III.3 indicate the distribution of the various ethnic groups within the town in 1966. These maps demonstrate with exceptional clarity the compact and clustered distribution of Northern migrants. The majority of these Islanders were concentrated in a small area of central Tutakimoa, Pué and along the main road at Avatiu. Rarotongans and Southern migrants by contrast were much more evenly distributed throughout the town. Finally, Europeans were mainly concentrated in a series of small clusters throughout Nikao coinciding with areas of Administrative housing.

(iii) Residential Dissimilarity

It is possible to further examine the residential concentration of particular ethnic groups within the town by using dissimilarity indices calculated for the nine village sub-areas on the basis of birthplace of household heads (Table 3.13)*. This index incorporates the percentage distribution of each group by area. The index of dissimilarity between Rarotongans and Europeans is 50.925 which simply means that half of the European population would have to change their place of residence to reproduce the percentage distribution of Rarotongans and vice versa. Although the index relates only to the percentage distribution and not the absolute size of the groups involved, it nonetheless provides a useful summary of a complex spatial relationship. Although spatial associations can be inferred from the simple dot distribution maps (see Figures III.2 and III.3) it is much easier to assess from indices of dissimilarity (Table 3.13). From these values it is apparent that there exists a high degree of residential exclusiveness among Avarua's ethnic groups. Europeans are segregated from all groups and highly segregated from Manganians, Atiuans and Mitiaroans. This high index of dissimilarity between Europeans and other groups is expressed spatially by the enclaves of European housing in Tutakimoa and Nikao. It is also clear that Rarotongans and the three

* For a discussion of dissimilarity and segregation indices see Appendix A.

TABLE 3.13

INDEXES OF RESIDENTIAL DISSIMILARITY*

	Aitutaki	Mangaia	Atiu	Mauke	Mitiaro	Palmerston	Pukapuka	Manihiki	Rakahanga	Penrhyn	European	French Polynesia
Rarotonga	27.14	38.31	20.715	40.055	53.97	55.35	51.975	33.635	83.765	43.105	50.925	51.55
Aitutaki		42.53	32.03	26.685	67.095	46.26	46.435	32.985	69.385	38.145	43.87	46.43
Mangaia			28.85	43.735	53.745	56.15	64.995	33.925	81.815	56.915	61.43	25.91
Atiu				39.77	48.365	56.03	61.095	32.71	92.745	54.785	65.97	43.83
Mauke					38.85	53.745	55.22	33.825	72.77	43.65	45.505	45.485
Mitiaro						63.385	68.75	57.08	87.5	73.55	63.33	66.665
Palmerston							54.795	36.665	44.445	25.635	50.08	38.88
Pukapuka								59.61	75.00	59.61	57.075	59.085
Manihiki									62.205	38.31	44.38	28.505
Rakahanga										41.34	55.63	58.325
Penrhyn											47.305	34.845
European												61.32

* Avarua villages and sub-village areas based on ethnic structure of household heads.

Source: Housing and Social Survey.

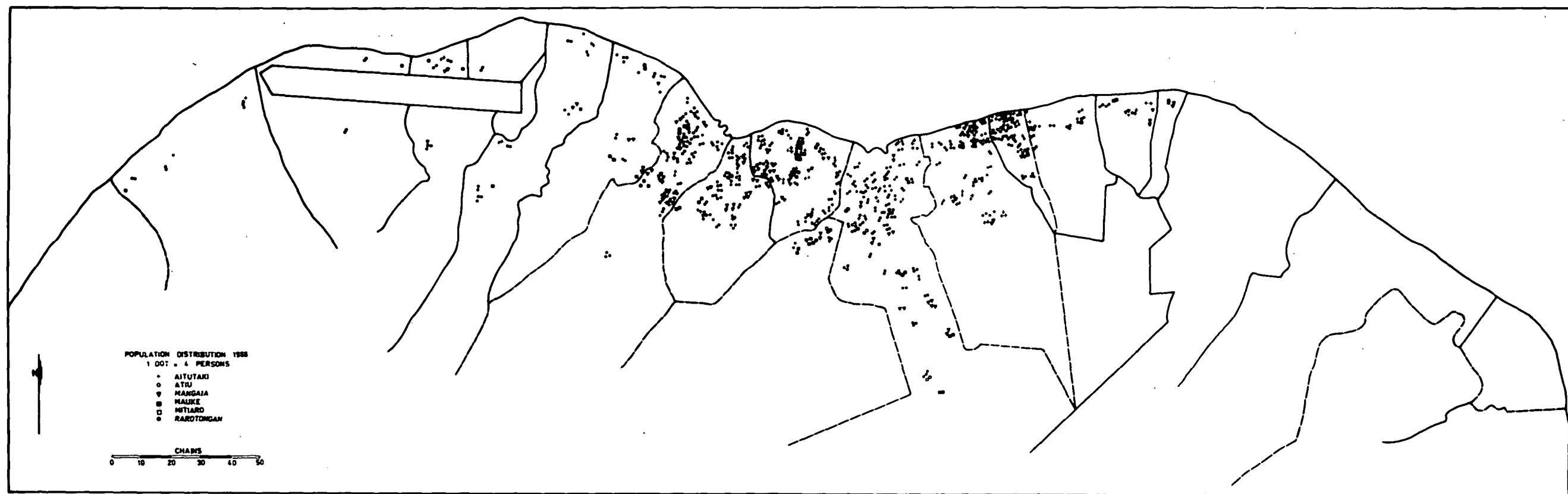


Fig. 111.2 Distribution Southern Migrants, Avarua 1966.

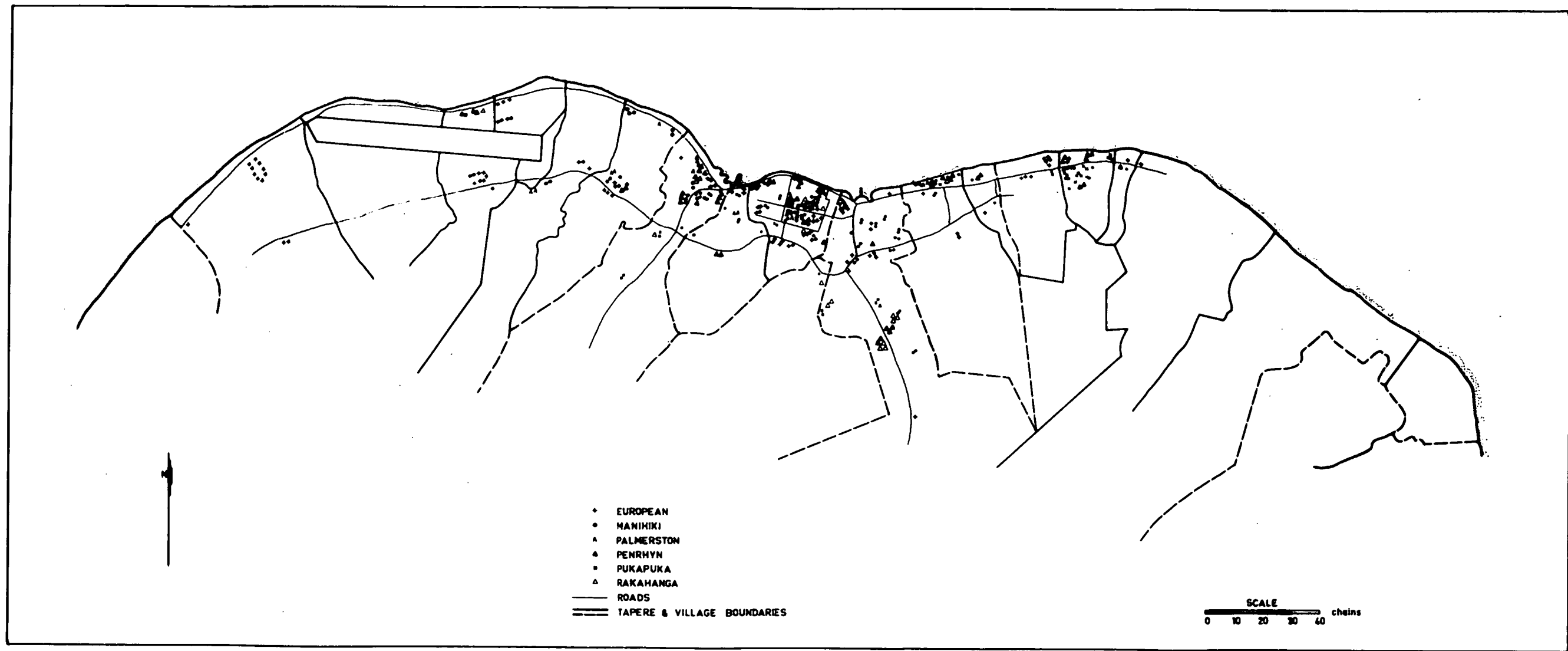


Fig. 111.3 Distribution Northern Migrants and Europeans, Avarua 1966.

main Southern-migrant groups (Aitutakians, Mangaian and Atiuans) are closer to one another than they are to other groups with the exception of Manihikians. Rarotongans record low rates with Aitutakians, Atiuans, Mangaian and Manihikians and the same holds true for Aitutakians and Mauke Islanders, Mangaian and Atiuans and Aitutakians and Atiuans. By contrast, Rarotongans have significantly higher rates of residential dissimilarity with Northern migrants ranging from 33.6 with Manihikians to a very high 83.7 with Rakahangans. The same holds true for the Southern migrant groups, all of which are fairly high segregated from Northern Atoll migrants. The highest level of residential dissimilarity is between Atiuans and Rakahangans (92.7) indicating an almost complete level of segregation between the two groups. So far as Northern migrants themselves are concerned, intra-group segregation is also the case. Palmerston and Penrhyn Islanders have a fairly similar distributional pattern while the residential dissimilarity between Palmerston Islanders and Manihikians and Manihikians and Penrhyn Islanders is of the order of 36.6 and 38.3 respectively. Between Pukapukans and all other Northern groups, however, there is a high degree of dissimilarity which is expressed spatially by the enclave settlement of Pukapukans at Pué in Tupapa. The small French Polynesian group is closer to some of the Northern groups (especially Manihikians, Penrhyn and Palmerston Islanders) than to Southern groups with the noticeable exception of Mangaian.

Insofar as the patterns of residential location and dissimilarity between two groups are a function of the differences between ethnic groups then this residential separation suggests wide social distance between the various Island groups in the town.

(iv) Some Factors of Location

Location within Avarua is a complex phenomenon involving a number of interrelated factors such as land tenure, exogamy rates, the availability of rented and Government housing and the prevalence of

squatting on unoccupied land. Within the town only a small percentage of migrant groups can aspire to become house owners and then only by intermarriage with local groups. For many, therefore, residential location is dependent on where they are able to find accommodation to rent or on the hospitality and assistance of kinsfolk already established within the town. When accommodation is provided by the **Government** or by kinsfolk the only decision involved is whether to accept or reject it. There are several concentrations of Government housing for senior administrative officers on Rarotonga, the largest being adjacent to the secondary school college at Tereora. Other smaller concentrations occur at Nikao and scattered throughout the town proper in Tutakimoa, Ruatonga, Lower Takuvaine and at Pué. In addition to these houses, the Government-run hotel provides temporary rented accommodation for new expatriate arrivals as well as single accommodation for males working for the Administration. A few privately-owned flats were beginning to make their appearance in 1966-67 but as yet their number was too few to have any impact on the town's residential structure.

As a group, Northern migrants are more severely restricted than other groups in their choice of where they live, since they are so heavily dependent upon accommodation with kinsfolk. This explains their concentration in a few restricted sites within the town, notably at Pué and at Tutakimoa. In both cases there has operated a principle of kinship attraction with new arrivals erecting temporary dwellings alongside or nearby to longer settled kin. The longer period of residence spent in the town and the considerable degree of intermarriage with local groups characteristic of Southern migrants has meant that these groups are more advantaged in the search for desired residential locations. Nevertheless, many Southern migrants without any social link with local landholding groups are either forced like their Northern counterparts to seek accommodation with relatives or in some cases squat illegally on unoccupied land or land on the periphery of the town. In some cases a migrant may hold a piece of land under the 'occupation rights' scheme whereby the land-owner(s) and the Land Court have recognised the right of a particular householder and his direct

descendents to continue to occupy a dwelling site. Householders are required to pay a small annual consideration (atinga) to the ariki or land-owner(s) concerned as an acknowledgement of his proprietorial right. In 1966 the amount involved for house sites in Maraerenga was one shilling (see Crocombe, 1964: 113 for a further discussion of this form of tenure). By 1966 penetration of Northern and Southern-born migrants was beginning to take place in some parts of the town's fringes, notably in Upper Takuvaine and Avatiu-Atupa. In these areas, unoccupied land was often illegally occupied or in many cases the land-owner(s) and the squatter came to a mutual agreement whereby the latter could remain on the land usually rent free, provided that he refrained from erecting a building of permanent construction. Some squatters within the town, notably in Tutakimoa have been occupying the same site for two or more generations.

Penetration and settlement of migrants such as mentioned above is far from being an individual phenomenon. Once a family is established its presence alone becomes the reason for the migration of others. In this way small homogeneous clusters of migrants from the same village or Island come about and perpetuate themselves.

(v) Age and Sex Composition

In 1966 the population of Avarua was a predominantly youthful one with relatively few persons over the age of 50 years. The low proportion over this age is not surprising if we consider that the town experiences a large intake of young migrants every year including many young females and children. In 1966 approximately 37 percent of the town's population were aged between 15 and 39 years, 46 percent were under 15 years and only 17 percent were over 40 (Unpublished Census tables 1966). The proportion of males to females varied considerably at different ages (see Table 3.14). Under 19 years of age the two sexes were relatively well balanced but in the age group 20 to 24 years there was a marked excess of females. Thereafter, males were dominant in all age groups with the exception of the 35-39 age bracket.

TABLE 3.14

AGE AND SEX COMPOSITION OF AVARUA AND VARIOUS ETHNIC GROUPS ON RAROTONGA 1966

Age Group	(%)											
	<u>Total</u>		<u>Rarotonga</u>									
	<u>Avarua</u>		<u>Rarotongan-Born</u>		<u>Southern Migrants</u>		<u>Northern Migrants</u>		<u>European</u>		<u>Other Pacific</u>	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
0-4	9.62	9.31	13.68	13.6	3.1	2.2	3.82	3.71	2.92	3.39	2.82	1.69
5-9	7.23	7.88	9.64	10.44	3.37	3.46	6.57	6.79	3.9	3.39	1.13	0.565
10-14	5.84	6.11	6.46	6.96	4.67	5.44	7.1	6.46	1.21	0.486	5.07	4.52
15-19	6.13	6.32	5.08	4.77	8.54	8.76	9.12	7.22	2.67	0.97	2.82	3.95
20-24	3.98	4.9	2.14	3.37	7.55	8.04	4.66	5.84	5.58	4.85	3.95	1.13
25-29	3.35	3.15	2.61	2.14	5.03	4.94	3.71	3.93	7.05	2.18	1.69	2.83
30-34	2.98	2.49	2.16	1.91	4.22	2.47	2.19	3.39	8.75	4.12	2.83	5.07
35-39	2.22	2.26	1.54	1.41	3.01	3.01	2.67	3.08	8.5	1.94	4.52	2.83
40-44	2.22	1.6	1.73	1.26	2.92	2.29	1.38	2.97	7.77	2.67	1.69	3.39
45-49	1.79	1.36	1.34	1.21	1.75	1.93	2.86	1.8	3.9	1.45	3.95	2.26
50-54	1.32	1.31	1.09	0.915	1.88	2.02	1.69	1.91	6.07	1.21	4.52	5.08
55-59	0.998	0.877	0.765	0.575	1.44	1.35	1.17	1.17	4.13	0.97	2.83	5.08
60-64	0.86	0.637	0.448	0.39	1.12	0.898	0.848	0.636	3.16	1.45	3.39	3.95
65-69	0.928	0.808	0.582	0.532	1.12	1.21	1.27	0.848	3.16	1.21	4.52	1.69
70+	0.671	0.825	0.498	0.615	1.03	1.17	0.424	0.848	0.972	0	5.65	4.52

Source: 1966 Population Census; Immigration Records 1966.

Overall the sex ratio was 98.7 females per 100 males. The age - sex structure of Avarua in 1966 differed very little from that of the whole Island and apart from a noticeable deficit of children under 15 years in the town's population compared with the whole Island, the town could only boast a slight excess of young adults, especially females, in the 15 to 39 year age groups.

When the proportion of females to males is examined by age for the various ethnic groups on the Island a number of interesting points emerge (Table 3.15)*. The figures for Southern migrant groups show an excess of females in the youthful adult age groups, especially 20 to 24 years, and a dominance of males in the late 20s and 30s. High femininity ratios in these age groups seems to suggest either a migration of young females to the Island or the emigration of many young males. In actual fact both trends seem to have taken place. Large numbers of young men who moved to Rarotonga and later to New Zealand left their wives in the Outer Islands for initial periods of several weeks, or even a year or more. After a period of time, wives followed their husbands to Rarotonga where they remained for some time if their husbands had emigrated to New Zealand. In many cases a wife and children moved to stay with relatives in Rarotonga so as to be on the spot when her husband required her to join him in New Zealand. The 20 to 24 year age group would seem to be the most prone to male emigration and in 1966 the sex ratio for this age group for the total Rarotongan population was 125 and significantly higher for some ethnic groups. If the age groups in the early 20s are marked by an excess of females, the late 20s and 30s are characterised by the reverse - suggesting that many females have left the Island either as emigrants to New Zealand or as returnees to the home village. Such a migrational pattern and the splitting up of family groups is also reflected in the build-up of young adults in the Southern migrant population. In 1966 over 38 percent of the Southern-born community were aged between 20 and 39 years compared with only 17

* No detailed ethnic breakdown by age and sex is available for Avarua.

TABLE 3.15

SEX RATIOS* SELECTED AGE GROUPS RAROTONGA 1966

<u>Birthplace</u>	<u>Age Groups</u>				
	15-19	20-24	25-29	30-34	35-39
Rarotonga	93.8	157.4	81.7	88.5	91.4
Aitutaki	88	75.5	65.5	42.3	85.7
Mangaia	100	140.5	161.4	65.2	111
Atiu	111.6	100.4	64.4	75	120
Mauke	111.7	161.5	94.5	428	71.5
Mitiaro	85	71.5	128.5	71.5	160
Palmerston	-	-	-	-	-
Pukapuka	109.9	50	100	133	100
Manihiki	65.8	120	217	200	113
Rakahanga	100	111	100	200	60
Penrhyn	72	222	53.7	227	100
Total Northern Atolls	84.67	125.75	117.67	195	93.25
Total Southern Migrants	99.26	109.8	102.86	59.36	109.04
Total Rarotonga	94.4	125	88.65	83.35	87.6

* Number of Females per 100 Males

Source: Cook Island's Population Census 1966.

percent of the Rarotonga-born and 29 percent of the Northern-born community. Chapter I has already indicated that the 20 to 29 year age groups were the ones to suffer the greatest population loss through emigration during the 1961-1966 period.

By contrast to Southern migrants and Rarotongans, the Northern-migrant population shows an excess of females at most age groups over 19 years particularly for the age groups 20 to 34 years suggesting that many young males have left the Island for New Zealand while married men have emigrated leaving wives and family behind.

All this confirms the role of the town as a staging point in the migration process and it also suggests that Southern and Northern migrants are at different points along the emigration continuum. Southern migrants including Rarotongans seem to have passed through the phase of individual male migration, although this is still significant for the 20 to 24 year age group, and entered a phase of delayed family migration, females and children following their males to New Zealand after a short period. By contrast, Northern Atoll emigration is still largely a movement of young adult males. Northern migration to Rarotonga is a much more recent movement and includes a larger proportion of family groups and children born outside Rarotonga than does Southern groups. In 1966 almost 35 percent of the Northern-born population was aged under 15 years compared with only 22 percent of the Southern group.

Within Avarua and on Rarotonga generally, the European and Other Pacific populations stand outside the inter-Island migration-emigration cycle. The European population as shown in Figure III.4 is dominantly an adult working age population in which males greatly outnumber females. Over half the population is aged between 20 and 44 years and more than one-third of the total population are young adult males. Children under 15 years of age are conspicuous by their absence while at the other end of the scale approximately ten percent are aged over 60 years. The sex ratio for all age groups was a very low 43.55 indicating the importance of males in the community. Males heavily

outnumbered females in the young adult age groups especially at 25 to 29 years (ratio of 31.3) and 35 to 39 years (ratio of 22.85). The lack of females in the young adult age groups is in part compensated for by the high degree of intermarriage between European males and local girls.

By contrast to Europeans, other Pacific Island groups (mainly French Polynesians together with a very small number of Niueans, Samoans and Fijians) had a very elderly population structure in 1966 with more than 41 percent being aged over 50 years and almost one-quarter of the total population over 60 years of age. Age-specific mortality and emigration is responsible for the fir-tree appearance of their age-sex pyramid. Many of the older residents in this community represent remnants of pre-1930 migrants to Rarotonga who moved to the Island as a result of economic pressures and kinship linkages. The small number of children shown in this age-sex pyramid does not reflect the true situation as most of these Islanders have been resident on the Island for many years and have significantly intermarried with Cook Islanders (see Figure III.4).

Tables 3.16 and 3.17 show the variation in the relative importance of adult age groups in the various village settlements of the town. These figures reveal among other things that young males form a large proportion of the total male population in Tutakimoa and Pué - Matavera while young females were characteristically concentrated in Nikao, Avatiu-Ruatonga and Tupapa-Maraerenga*. One interesting feature of the demographic structure of Avarua's population is presented by a comparison of the ethnic and sex composition. In only two village areas within the town do males tend to be overall more numerous than females and the imbalance would seem to be greatest in those areas where migrants from the Southern Islands have settled. On the other hand, females would seem to be a more significant element in the population of areas of Northern migrant settlement, particularly Tutakimoa and Pué. When this

* This data is calculated on the basis of the 1966 census divisions and not on the survey material.

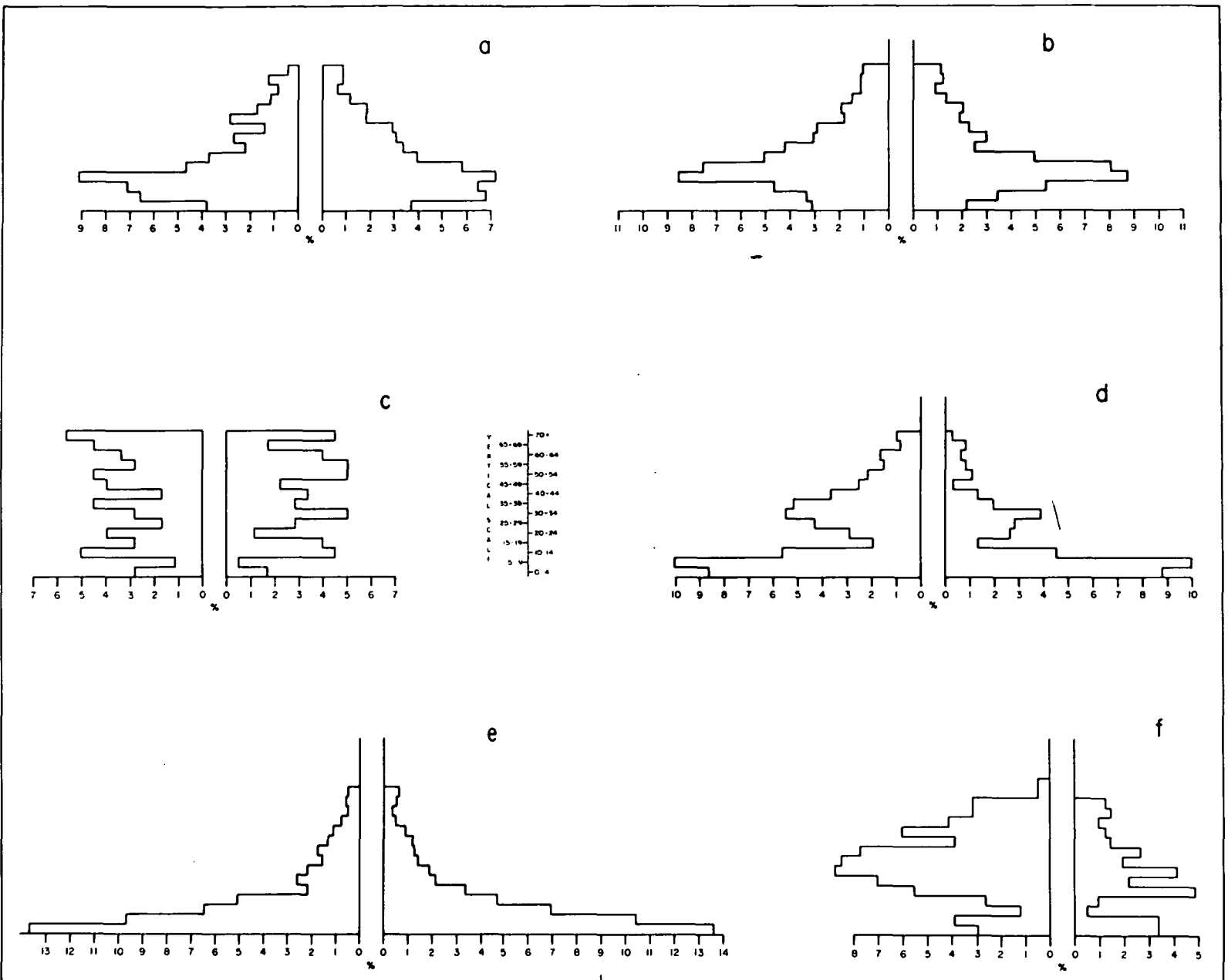


Fig. III.4 Age Structure Ethnic Groups on Rarotonga.

- a Northern Migrants
- b Southern Migrants
- c Other Pacific Islanders
- d Metropolitan-born (NZ, Aust. etc)
- e Rarotongan-born
- f Europeans

TABLE 3.16RELATIVE IMPORTANCE OF ADULTS, AVARUA 1966

<u>Village</u>	Young Adults (15-39) as % of Total Male & Female Population		Adults (15-39) as % of Total Population	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
Tupapa-Maraerenga	36.99	38.28	48.19	47.46
Pue-Matavera	38.65	33.33	50.7	45.9
Tutakimoa	39.21	38.9	50.26	50.91
Takuvaine	38.59	39.12	52.27	49.47
Avatiu-Ruatonga	37.66	39.23	51.56	48.97
Nikao	29.78	40.29	42.01	49.24

TABLE 3.17PERCENTAGE OF POPULATION IN VARIOUS AGE GRADES: AVARUA VILLAGES

<u>Village</u>	Under 15		15-39		40-59		60+	
	M	F	M	F	M	F	M	F
Tupapa-Maraerenga	21.62	24.28	17.78	19.95	5.38	4.91	3.38	3.05
Pue-Matavera	22.01	24.61	19.08	17.02	6.62	6.36	2.32	2.76
Tutakimoa	22.15	22.01	19.7	19.56	5.50	6.03	2.62	2.63
Takuvaine	22.37	22.67	19.97	18.69	7.08	4.97	2.35	1.6
Avatiu-Ruatonga	22.37	22.78	19.37	19.09	7.16	4.74	2.53	2.41
Nikao	27.05	24.16	14.52	20.61	5.96	4.58	1.22	1.83

Source: Cook Islands Census 1966

imbalance in the sexes is made more age-specific (see Table 3.18) it can be seen that a wide divergency exists among the various parts of the town. Females are most significant in the village settlements of Tutakimoa, Tupapa-Maraerenga and Nikao especially in the 20 to 24 year age group. On the other hand males tend to figure more prominently in the 25 and over age groups and especially in the 30s. The importance of females in the 20 to 24 age group in most parts of the town is clearly in keeping with the thesis of delayed family migration, that is, young women moving to Avarua to join a husband or en route to New Zealand. The presence of many young females in the 25 to 29 age group in areas settled by Northern migrants (Pue and Tutakimoa) suggests that emigration to New Zealand has removed some young males from these areas. The high femininity of Nikao can in part be explained by the large number of European households employing house-girls.

Comparison with other tropical colonial towns is very difficult as Avarua stands mid-point on a major migrational path beginning in the isolated rural village and ending in the towns and rural areas of New Zealand. This has tended to reverse the trend of high masculinity in the adult age groups normally associated with central places in developing areas.

(vi) Differential Fertility

In view of the youthful age structure of the town and declining mortality rates since the 1920s it is not surprising that the rate of natural increase is high. This is especially true of immigrants from the Outer Islands as the greater proportion of their numbers are in the reproductive age groups. Material on differential fertility is lacking in the published Cook Island statistics, however, this problem can be resolved by a judicious meshing of birth statistics drawn from the official birth registers with 1966 census material which enables the construction of age-specific birth rates for the various ethnic groups. In 1966 the crude birth rate for all groups on Rarotonga was 46.6 - an example of a 'high' fertility pattern. Within the population at large,

TABLE 3.18

AGE SPECIFIC SEX RATIOS AVARUA VILLAGES 1966

<u>Villages</u>	15-19	20-24	25-29	30-34	35-39	40-44	Total
Tupapa-Maraerenga	122.9	159.07	82.58	71.34	128.87	85.91	108.34
Pue-Matavera	89.79	76.99	108.09	66.66	111.91	80.36	102.52
Tutakimoa	66.05	161.94	152.61	116.52	70.33	111.01	100.78
Takuvaine	108.52	109.58	73.6	80.44	78.38	36.84	92.83
Avatiu-Ruatonga	97.92	126.15	75.42	59.55	142.78	54.2	94.67
Nikao	161.85	135	157	149.67	86.89	144.2	105.01

Source: Cook Islands Census 1966.

however, there were noticeable ethnic differences which become apparent when age-specific fertility tables are constructed (Table 3.19). These figures show the considerable variation that exists among the different groups. Figure III.5 presents this material in a modified form. Four sets of data are recorded for the three major ethnic subdivisions of Rarotonga's population as well as for all groups combined. From this it will be seen that Southern migrants exhibit the highest fertility pattern, particularly at the 20 to 24 age group where there were 0.466 births per woman in 1966 with another peak ten years later in the 30 to 34 year age group. By comparison, Northern migrants also had a very high fertility performance, although in this case the peak was reached five years later in the 25 to 29 year age group (0.459 births per woman). Finally, for women born on Rarotonga fertility performance was markedly lower than for the immigrant groups. Like Northern migrants, Rarotongan women reached their peak fertility in the 25 to 29 age group although their performance was below that of other groups on the Island. After this age bracket, fertility declines very rapidly to only 0.156 births per woman at age 30 to 34 (compared with 0.418 and 0.344 for Southern and Northern migrant groups respectively). Rather unusually, the Rarotongan rate experiences a slight reprise at the 35 to 39 age group to 0.223 births per woman. When the Total Fertility Rate is computed for the various ethnic groups (Table 3.19) the result is a hypothetical fertility history based on birthrates*. These figures represent all the births of an assumed cohort of women starting at the age of 15 and undergoing this hypothetical fertility experience until the end of their child-bearing period. This data indicates that Southern migrants are the most fertile on Rarotonga with a rate of 8.4725 followed by Northern migrants (7.268) and Rarotongan-born women (6.578). Atiuans showed the

* The Total Fertility Rate is the sum of the age-specific fertility rates of women aged 15 to 49 and is similar to the General Fertility Rate but takes account of the distribution of the year's births among females of different ages. Hence it is a particularly useful means of summarising the frequency of births of a particular year. For a further discussion see Barclay, 1958.

TABLE 3.19

Source: 1966 Register of Births;
1966 Population Census.

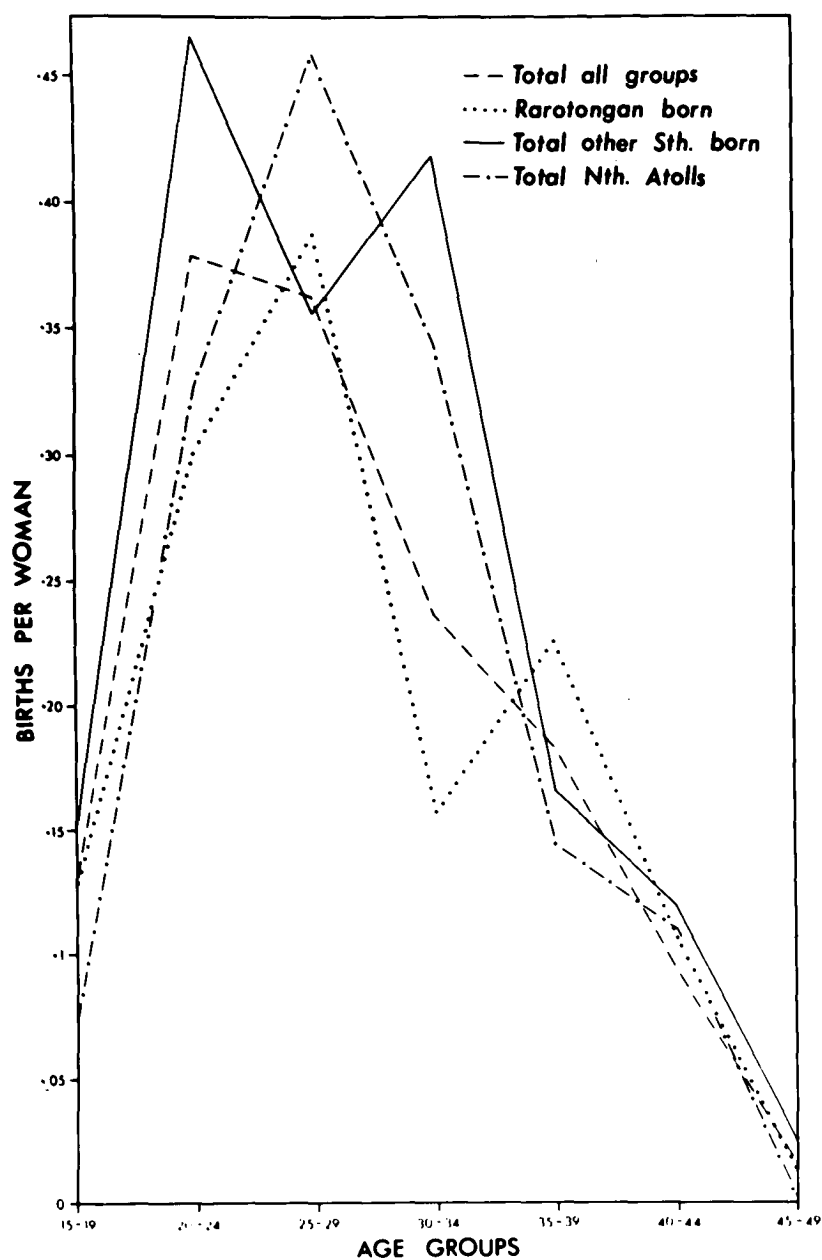
AGE-SPECIFIC FERTILITY RATES RAROTONGA 1966

(Births per Woman)

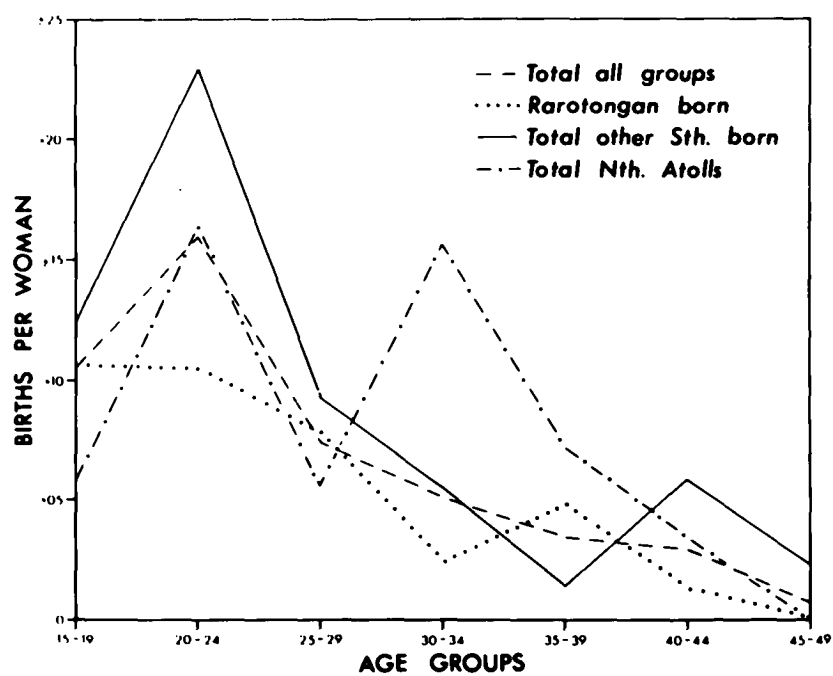
	Rarotonga	Aitutaki	Atiu	Mangaia	Mauke	Mitiaro	Pukapuka	Palmerston	Rakahanga	Manihiki	Penrhyn	European	Other
15-19	.129	.136	.137	.191	.059	.294	.083	0	.111	.080	.055	.125	0
20-24	.200	.425	.480	.500	.422	.500	.500	.333	.500	.222	.300	.375	.750
25-29	.387	.473	.400	.262	.411	.333	0	0	.555	.615	.571	.059	.400
30-34	.156	.454	.500	.266	.500	.400	0	.500	.455	.333	.333	.125	.222
35-39	.223	.111	.333	.211	.100	.125	0	0	0	.222	.333	0	0
40-44	.105	.118	.286	0	.125	.333	0	.250	0	.286	0	0	0
45-49	.014	0	0	.077	0	0	0	0	0	0	0	0	0
Total Fertility Rate	6.578	8.586	10.68	7.54	8.089	9.935	2.916	5.415	8.106	9.089	7.965	3.419	6.861

AGE-SPECIFIC ILLEGITIMACY RATES RAROTONGA 1966

	<u>Rarotonga</u>		<u>Southern-Born</u>		<u>Northern Atolls</u>		<u>Other</u>		<u>Total Rarotongan</u>	
	<u>Total Illegitimate</u>		<u>Total Illegitimate</u>		<u>Total Illegitimate</u>		<u>Total Illegitimate</u>		<u>Total Illegitimate</u>	
15-19	.129	.105	.150	.124	.073	.059	.067	.067	.127	.104
20-24	.300	.103	.466	.230	.328	.164	.450	.100	.378	.159
25-29	.387	.077	.355	.093	.459	.054	.136	0	.362	.074
30-34	.156	.026	.418	.055	.344	.156	.151	.030	.234	.051
35-39	.223	.047	.164	.015	.143	.071	0	0	.182	.035
40-44	.105	.013	.118	.059	.107	.036	0	0	.094	.029
45-49	.014	0	.023	.023	0	0	0	0	.014	.007
Total Fertility Rate	6.578	1.855	8.472	2.995	7.268	2.7	4.02	0.985	6.955	2.295



Legitimate Fertility



Illegitimate Fertility

Fig. III:5 Age-Specific Fertility Rates, Rarotonga 1966.

highest fertility pattern and on the experience of 1966 conditions every Atiuan woman on Rarotonga could expect to bear 10.68 children during her fertile period. This rate was closely approximated by Mitiaroans and Manihikians. Rarotongans on the other hand could expect to give birth to a hypothetical 6.578 children. Undoubtedly emigration has played a major role especially as far as the Rarotongan community is concerned, as many young females of child-bearing age have moved to New Zealand. On the other hand migration of Northern Islanders is still in the early stages and hence family establishment is still incomplete. European women by contrast to the Cook Island groups exhibited a much more 'Western' fertility pattern.

A particularly interesting feature of Rarotonga's population is the high proportion of illegitimate births. Of the 464 births that took place on the Island in 1966, 181 or 39 percent were illegitimate (1966 Register of Births, Rarotonga). As Table 3.20 shows, these illegitimate births formed a considerable proportion of all births when examined by age of mother. Illegitimacy is, however, of more significance for the younger than the older age groups. More than 82 percent of all births to women aged under 19 years, for example, were illegitimate in 1966 as compared with only 30 percent for all other age groups. The fact that almost 40 percent of all children born in 1966 were illegitimate somewhat understates the full significance of premarital pregnancy. It is important to note that 64 of the married women giving birth in 1966 had sometime previously borne an illegitimate child. For these women the average time marriage followed the birth of this child was 22 months, indicating that if these women married the father of their illegitimate child they did so at a somewhat later date. Nevertheless, evidence from population registers and interviews indicates that relatively few in fact did so. All this suggests that at some time the majority of women on Rarotonga have produced an illegitimate child. The fact that most will ultimately marry points to the considerable tolerance shown in the community to premarital births. In many cases the illegitimate child is

TABLE 3.20LIVE BIRTHS RAROTONGA BY AGE OF MOTHER 1966

<u>Age of Mother</u>	<u>Total Births</u>	<u>Illegitimate Births</u>	<u>% Illegitimate</u>
10-14	1	1	100
15-19	72	59	81.94
20-24	172	74	43.02
25-29	108	22	20.37
30-34	57	12	21.05
35-39	35	7	20.00
40-44	17	5	29.4
45-49	2	1	50.0
TOTAL	464	181	39.01

Source: Register of Births, Rarotonga

adopted either by one of the wife's brothers or by her parents or other relatives when she ultimately marries while in some cases her prospective husband may permit her to take the child into the marriage. The 1966 figures also reveal the significance of unplanned births in the Rarotongan population. For women married before their first birth (219) more than one in every two was pregnant before marriage took place. In 94 cases (43 percent) the first child was born before or during the first seven months of marriage and in one-third (78), during the first four months of marriage.

As Table 3.21 shows, most unmarried mothers in 1966 were in fact experiencing their first birth (116 or almost two-thirds) while of the remainder many had as many as three or more previous children. The average size of an unmarried mother's family in 1966 was 1.805 compared with 1.905 at the 1961 Census. Many of these women had of course not completed their childbearing period. Table 3.21 also suggests that some unmarried women will proceed through their fertile period without ever marrying. Many of these will continue to have children right up until the last years of their childbearing period. In 1966, for example, 6 unmarried mothers aged 40-49 gave birth and these women possessed a sum total of 29 children.

Within Rarotonga the incidence of premarital birth varies among the ethnic subgroups of the population. Illegitimacy is, for example, more significant in the case of immigrant mothers and in 1966 more than 62 percent of all illegitimate births on the Island took place to such women. For these immigrant mothers premarital births form a greater proportion of total births than is the case for mothers born on Rarotonga. Illegitimate births for example, comprise only 35 percent of total births for locally-born women, whereas the figure was 41.3 percent for women born outside Rarotonga and significantly higher in five Islands.

As Table 3.22 shows, 41.9 percent of total births occurred to Rarotonga-born women, while women born in the three main southern Islands of Atiu, Aitutaki and Mangaia contributed an additional 33 percent.

TABLE 3.21

NUMBER OF PREVIOUS CHILDREN TO UNMARRIED
MOTHERS 1966

<u>Age Mother</u>	<u>Number of Previous Children</u>										Total
	0	1	2	3	4	5	6	7	8	9	
10-14	1										1
15-19	50	6	2	1							59
20-24	41	20	10	2							73
25-29	12	2	2	2	2		2				22
30-34	5	1	1	2		1	2				12
35-39	6				1				1	1	9
40-44	1	1			1				1	1	5
45-49	-	1									1
Total	116	31	15	7	4	1	4		1	1	180

Source: Register of Births, Rarotonga

TABLE 3.22BIRTHS BY BIRTHPLACE OF MOTHER 1966

<u>Birthplace</u>	<u>Total Births</u>	<u>Illegitimate Births</u>	<u>% Illegitimate</u>
Rarotonga	194	69	35.6
Atiu	54	26	48.15
Mangaia	55	26	27
Aitutaki	41	18	43.9
Mauke	25	4	16.0
Mitiaro	17	9	52.94
Palmerston	3	1	33.33
Penrhyn	17	8	47.06
Manihiki	20	7	35.1
Rakahanga	17	7	41.18
Pukapuka	3	2	66.6
European (N.Z.)	11	3	27.27
Other	7	1	14.2
<hr/>			
TOTAL	464	181	39.01
<hr/>			

Source: Register of Births, Rarotonga

Age specific illegitimacy rates (Table 3.19 and Figure III.5) reveal the differences between the various ethnic subgroups in the population. Southern migrants had the highest rates especially at the 20 to 24 year age group (0.23 illegitimate births per woman) while the Northern migrant distribution revealed two peaks, 0.164 at 20 to 24 and 0.156 at 30 to 34. By comparison, native-born Rarotongans had a rate considerably lower than the two major immigrant groups. When these rates are computed to Total Fertility Rates it is revealed that Rarotongan women could be expected to give birth to 1.85 illegitimate children, Northern migrants to 2.7 and Southern migrants to almost three. Within this Southern figure, considerable variation existed between Atiuans at one extreme with the very high total premarital fertility rate of 3.828 to Maukeans with a rate of 1.3645 at the other.

Figures for the town of Avarua add support to the conclusion that immigrant Cook Island mothers exhibit a higher illegitimacy pattern than locally-born women. In 1966 over 62 percent of all premarital births in Rarotonga took place to women resident in Avarua (Table 3.23) and almost 43 percent of all births in the town were illegitimate. These figures are, however, considerably higher for immigrant mothers, who accounted for more than 67 percent of all premarital births in the town. Within the town itself, the incidence of illegitimacy was found to be highest in the village settlements of Pué, Tutakimoa, Tupapa and Takuvaine (see Table 3.23). A feature of these areas was the large numbers of outer Island immigrants within the population. For example, Pué situated on the eastern fringe of the town, consists primarily of migrants from Pukapuka, while Tutakimoa, immediately adjacent to the town's main commercial area, is a compact village settlement largely of Islanders from the northern atolls of Manihiki, Rakahanga, Penrhyn and Palmerston. Within these areas housing conditions are often extremely depressed. Most are overcrowded, poorly ventilated and generally without their own water supply or means of sanitation. Most families are dependent on a meagre income of less than \$NZ8 per week and the average size of a household often approaches 10 people. In 1966, for example, Tutakimoa supported 471 people (49 households) in a total area of $5\frac{1}{2}$ acres. Crowded into these small 'shanty settlements' marked by physical

TABLE 3.23LIVE BIRTHS: AVARUA AND SELECTED DISTRICTS

<u>Taperes</u>	<u>Total Births</u>	<u>Illegitimate Births</u>	<u>% Illegitimate</u>
Tapae	1	-	-
Pue	14	9	64.29
Matavera	28	8	28.6
Tutakimoa	25	14	56.0
Maraerenga	13	5	38.46
Ngatipa	4	3	75
Avatiu	30	13	43.33
Takuvaine	44	23	52.27
Ruatonga	20	4	20.0
Atupa/Panama	6	4	66.66
Tupapa	38	17	44.74
Parekura	9	5	53.55
Nikao	32	8	25.0
<hr/>			
TOTAL AVARUA	264	113	42.8
<hr/>			
Arorangi	91	38	41.76
Titikaveka	31	9	29.03
Ngatangia-Muri	31	12	38.71
Other	48	9	19.15
<hr/>			
TOTAL RAROTONGA	464	181	39.01
<hr/>			

Source: Register of Births, Rarotonga

overcrowding, high unemployment rates, extremely low income levels, family separation, marginal health conditions and personal disorganisation, life is somewhat precarious and insecure.

Just how significant is illegitimacy and the position of the unmarried mother in contemporary Rarotongan society? The 1961 census records a total of 211 unmarried mothers with a total of 402 illegitimate children (Cook Islands Census, 1961, 1962). If these figures are compared with the total number of mothers and children in 1961 they show that 14.9 percent of all mothers were unmarried and 5.36 percent of all children were illegitimate. A comparative figure for 1966 is unobtainable because of a change in the 1966 census schedules. However, it is not unreasonable to assume that today between one fifth and one quarter of all mothers are unmarried and possibly between 6 and 10 percent of all children are illegitimate. Yet, as has been pointed out, such figures tend to disguise the real importance of premarital birth as probably one in every two females will bear an illegitimate child only to marry at a later date, thus legitimising the child. It would also appear that in few cases do these women actually marry the father of this child.

Traditionally, illegitimate children were often restricted in their access to land and there are many traditional stories of men and women put to death or banished in canoes or otherwise severely punished for unacceptable sexual contact. Today there is much evidence to suggest that the illegitimate child on Rarotonga is at a considerable social and psychological disadvantage. It would appear that there is a very much higher rate of petty crime in the town area among illegitimates and adoptees and that the question of legitimacy is a very common cause of disputes over land. In addition, many illegitimates are often at a considerable disadvantage in obtaining access to land. In pre-European times pre-marital sexual activity was very frequent and there was a whole ethic associated with it specifying who had access to who and under what circumstances. Today, despite attempts at a rigorous social control by

the church and the fact that most Islanders prefer birth to take place within the confines of marriage there is considerable tolerance of pre-marital sexual activity and to this extent there appears little break with traditional cultural practices*. Contraceptives, although readily available, are expensive, little comprehended and rarely used, except in the case of the expatriate European community. As the illegitimate child is tolerated within Rarotongan society so too is the unmarried mother. Many men allow women to bring their illegitimate children into the marriage when they do marry. On the other hand, in many cases the illegitimate child is adopted either by one the wife's brothers or by another relative.

Although illegitimacy in Rarotonga seems mainly to be a legacy of cultural conditions it seems also to be one of the social consequences of an immigrant situation. Undoubtedly there is parental pressure on the unmarried mother (or mother-to-be) to marry, although not necessarily the father of her illegitimate child. To this extent the higher rate of illegitimacy amongst immigrant girls could simply reflect the loosening of parental authority. Yet it is doubtful whether this fully explains the higher rates among immigrant girls as in many cases migration to Rarotonga has involved not only themselves but their parents as well.

Age specific fertility rates show that women resident in the town have a lower fertility performance at all age groups except the 30 to 34 one than women resident elsewhere on the Island (see Figure III.6). Likewise illegitimate fertility rates are slightly higher outside the town than within it with the same exception. The reasons why this should be so are difficult to assign with any certainty. Certainly it can not simply be assumed that urban living has served to alter traditional fertility patterns and family size. Rather the

* I am indebted to Professor R.G. Crocombe for the points raised above and for information on illegitimacy generally.

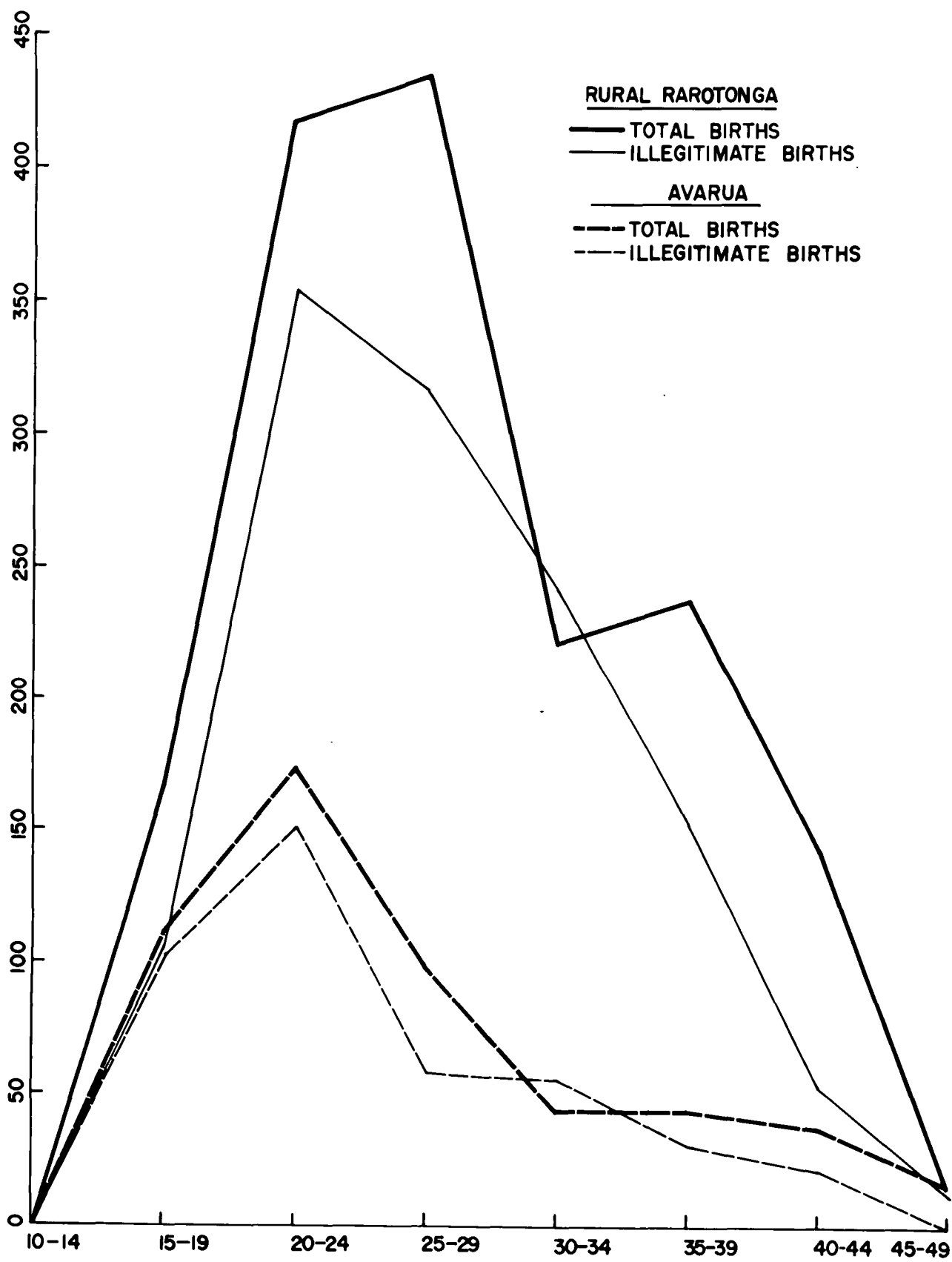


Fig. III.6 Age-Specific Fertility Rates, Avarua 1966.

explanation probably lies with the emigration of many young women to New Zealand as well as the build-up in the town of many young unmarried, or married women temporarily separated from their husbands, from the other Islands. That illegitimacy rates should be higher outside the town seems to point to the fact that having children outside the confines of legal marriage has a place in the traditional social system and perhaps it is much easier to continue traditional patterns in the total villages.

Unfortunately there is no breakdown of population figures to show the number of children born to women by ethnic group, neither does there exist any data on marital status by ethnic group. Age composition would seem to play a major role in influencing the level of fertility in the population, for example, females in the childbearing age groups formed a much larger proportion of Southern migrants (31 percent) than for Northern migrants (28.7) or Rarotonga-born population (16 percent).

Economic Characteristics : A Town of Part-time Farmers

The fact that many males are engaged in agricultural activities whether growing cash crops or cultivating family gardens is reflected in the relatively large number of households growing cash or subsistence crops (Table 3.24). In many cases family gardens or plantations were located some distance from the house site, in some cases many miles distant. The villages with a large Northern migrant population do not show a strong orientation to agricultural activities. Tutakimoa, for example, has the lowest proportion of males engaged in agricultural activities (12.5 percent) while the remaining villages comprising Avarua have between 21 and 44 percent of active males engaged in some form of agricultural activity either on a full- or part-time basis. A very much smaller proportion engaged in full-time subsistence activities and only in Upper Takuvaine and Atupa did this proportion exceed ten percent of employed males. In spite of this, a very high proportion of households in some parts of the town were growing food crops. The

TABLE 3.24

ECONOMIC ACTIVITY AVARUA HOUSEHOLDS AND MALES

Villages	(%)							
	<u>Households</u> <u>Growing Crops</u>		Subsistence Activities	<u>Males Employed</u>		Unemployed or Supported by Others		
	Cash	Subsistence		Salary/ Wages	Casually Employed		Females in labour force	% Households with Males engaging in agriculture at some time on land
Tupapa	20.61	42.25	10.00	60	21.1	4.73	17.25	38.4
Maraerenga	41.25	22.2	4.31	55.6	22	6.3	22.2	44.5
Lower Takuvaine	24.7	30.9	5	61.5	19.1	5	21.7	28.5
Upper Takuvaine	30.3	53	24.6	36.7	26.6	6.45	14.25	35
Tutakimoa	7.15	4.76	4.78	66	21	7.2	18.54	12.5
Ruatonga	28.7	61	6.1	65.5	5.69	7.5	21.5	22
Avatiu	16.9	85.9	4.08	63	12.25	5	24.5	43.6
Atupa	10.0	50	15	56.6	10	4.5	15.5	37.9
Nikao	17.9	19.8	4.8	73.6	9.43	5	17.9	21.4

Source: Avarua Housing and Social Survey 1966-67

figure is as high as 85 percent in Avatiu but very low in areas where landless migrants have settled (for example, Tutakimoa) and also low in the older more crowded areas of the town (Maraerenga and Lower Takuvaine). Agricultural activity tends to be of more importance in those villages where Rarotongans and Southern migrants are in the greatest numbers and lowest where Northern migrants with no access to land are numerous. The planter with a large family or kin group on Rarotonga may call upon them for assistance when a ship calls at the Island for picking and packing. In recent years, however, there has been increasing individualism and greater opportunity for wage employment which has meant that it is often very difficult to assemble a kinship group for such tasks and the burden of such activity falls back on the nuclear family or has to be partly met by part-time wage workers. Table 3.24 also reveals a number of interesting features of the occupational status of the town's inhabitants. Between 36 and 74 percent of employed males worked full-time for a wage or salary in 1966. An additional five to 26 percent engaged in some form of casual wage employment as subsidiary to some other activity. The concentration of European Administrative officers and school teachers in Nikao accounts for that areas high figure of those employed on wages and/or salaries. By and large the areas on the fringes of the town such as Atupa and Upper Takuvaine have a larger proportion of their male population engaged in full-time subsistence activities.

The shift, therefore, from a traditional subsistence economy to one in which money and exchange are the prime ingredients is not yet complete. The Avaruan townsman is not only a wage earner but also a part-time subsistence or cash cultivator. The tendency to move towards a greater involvement in wage labour employment must be seen as part of the very complex modernisation process in which there is a gradual movement away from a semi-peasant existence to a proletarian way of life in much the same way as has been documented by Finney on Tahiti (see

Finney, 1965: 269-328).

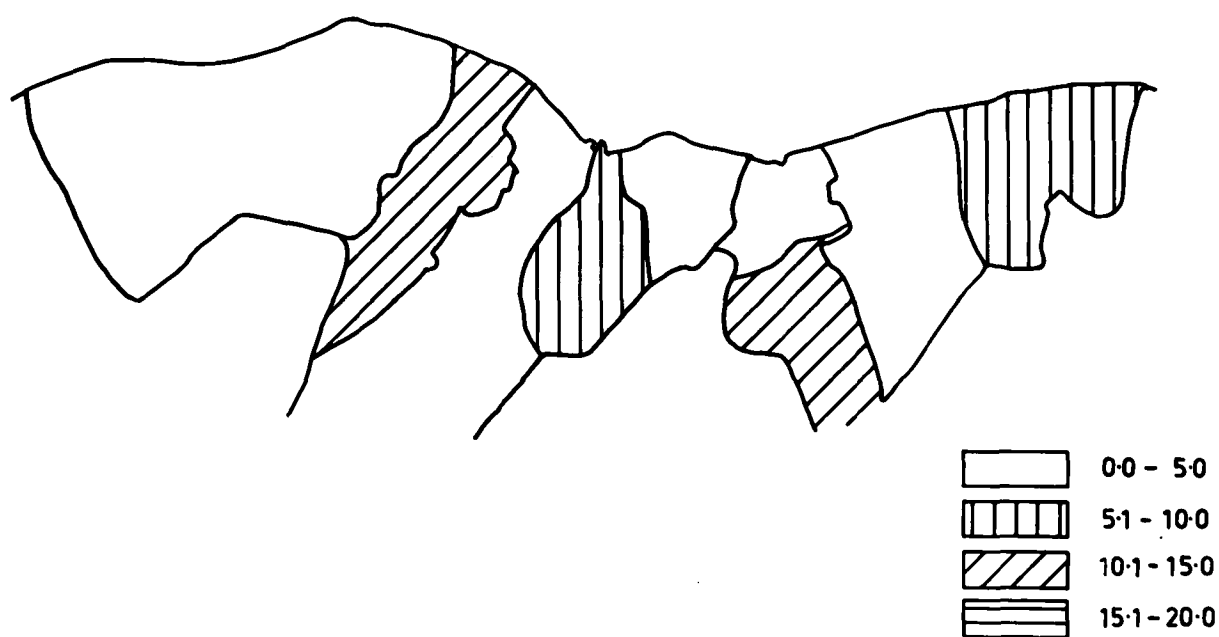
Figures III.7 and III.8 show the spatial distribution of males employed in various occupations. They show, for instance, that subsistence agriculturalists tend to be more important on the fringes of the town proper (excluding Nikao) especially in Atupa* and Upper Takuvaine. Commercial agriculture tends to occupy more males in Nikao and those areas of the town where local born groups are most significant in the population (for example, Ruatonga and Avatiu). The more densely settled areas of the town and areas which have seen considerable migrant settlement tend to be less agricultural - a fact no doubt indicative of some progress towards suburban development as well as the predominance of migrants with no claims to local agricultural land. The map for services (administrative and personal) shows the very large proportion of active males engaged in these activities, a proportion which is uniformly high throughout the town with the notable exception of Tupapa-Puē. Males engaged in manufacturing occupations show a concentration around the administrative centre of the town in Lower Takuvaine while males engaged in commerce are concentrated on the western fringe of the town (Tupapa-Puē) and to a lesser extent in Ruatonga and Lower Takuvaine.

Occupation and Employment

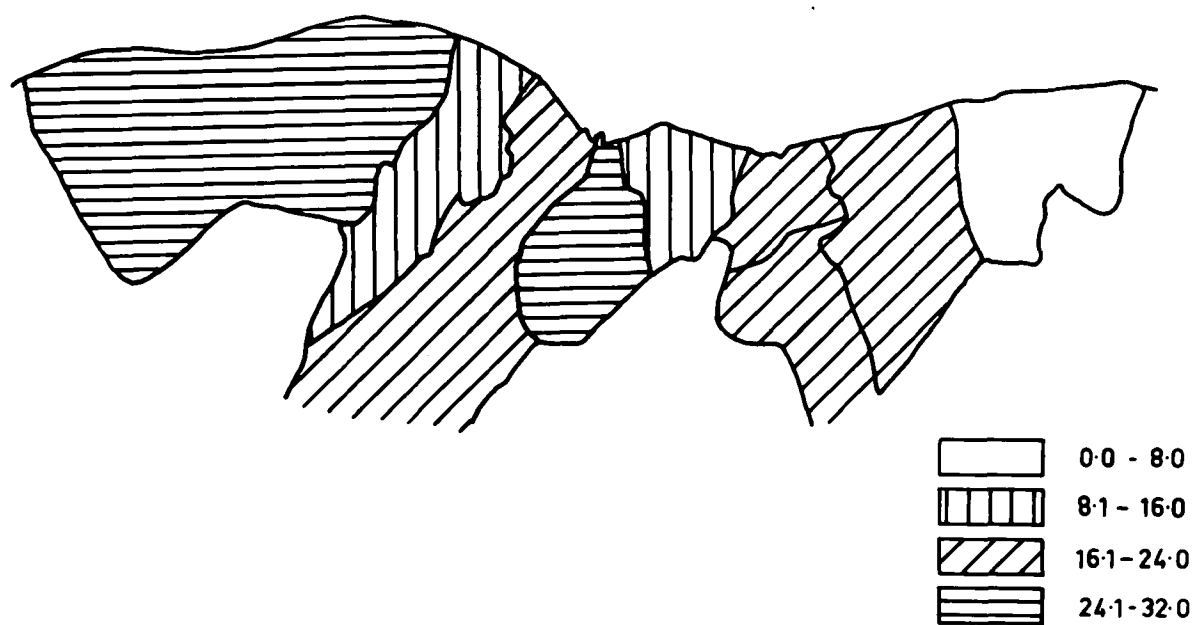
The aim of this brief section is not so much to investigate the structure of the town's labour force as a whole as to examine the occupational situation from the point of view of individual or group dependence. To this end workers within the town were classified according to the sector of the economy in which they worked as well as according to their occupational status. Table 3.25 details the classification of town workers according to their occupational status.

* Corresponding with the town's main irrigated taro belt.

SUBSISTENCE AGRICULTURE



CASH CROPPING



PERCENTAGE OF MALE POPULATION IN SECTORS
OF ECONOMY 1966 - 67

Fig. III.7 Distribution Selected Occupational Groups.

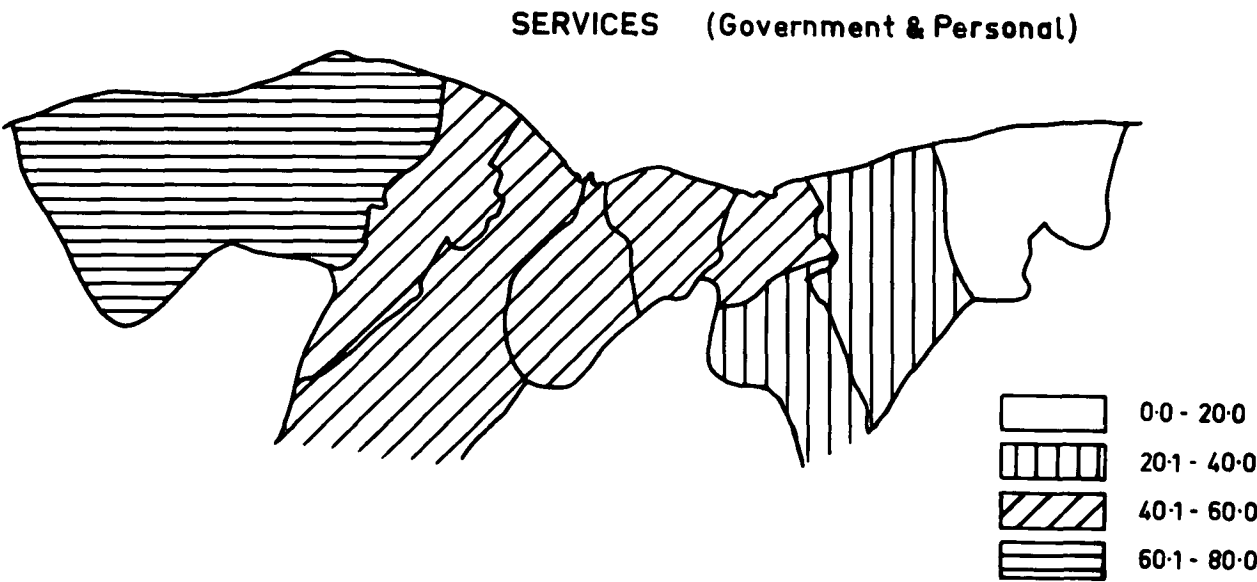
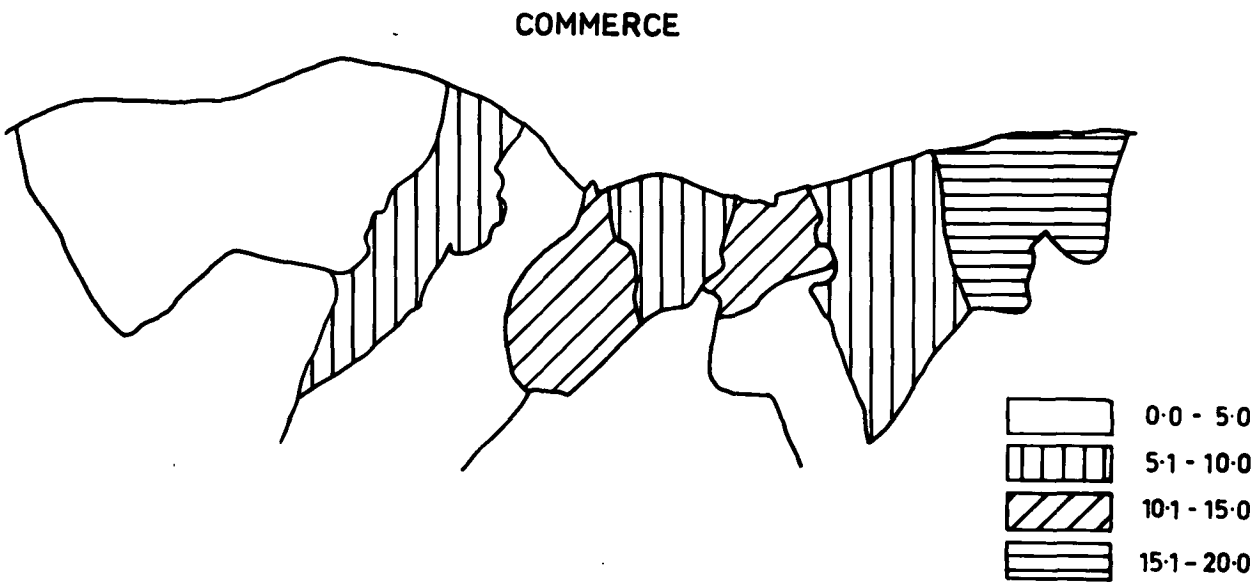
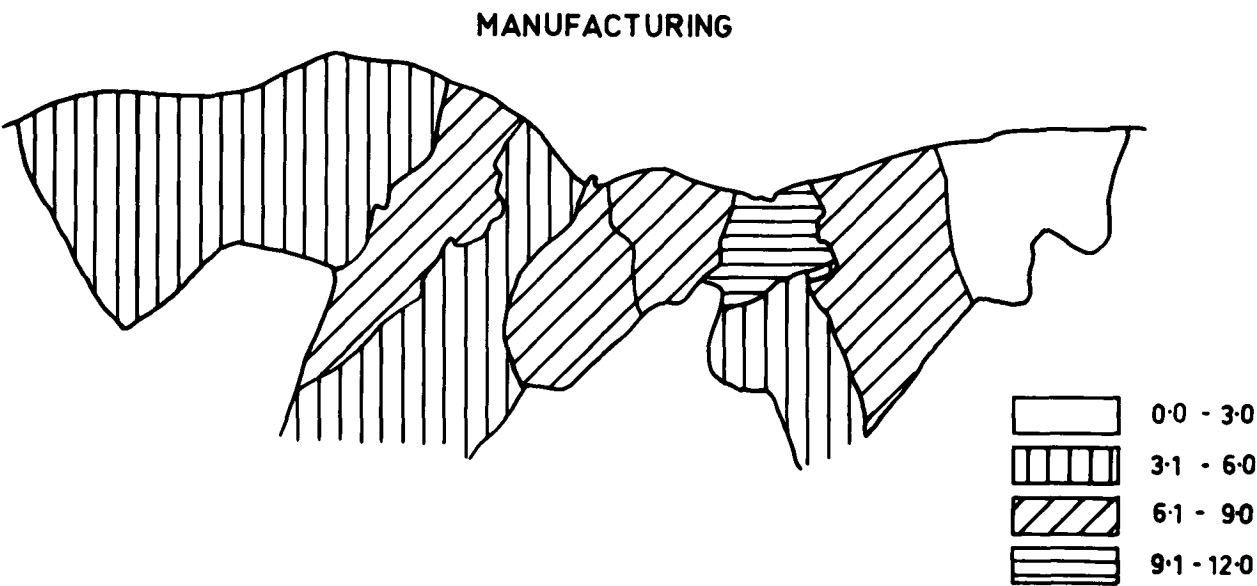


Fig. III.8 Distribution Selected Occupational Groups.

TABLE 3.25
OCCUPATIONAL STATUS OF AVARUA WORKERS
(%)

<u>Occupational Category</u>	<u>Rarotongans</u>		<u>Southern Migrants</u>		<u>Northern Migrants</u>		<u>Other</u>		<u>Total</u>	
	M	F	M	F	M	F	M	F	M	F
Shop Assistant	2.25	42.42	-	11.54	-	-	-	6	0.81	24.64
Clerical Worker	24.72	27.27	32.88	11.54	30.44	50.00	22.58	62.5	27.12	26.09
Driver	3.38	-	-	-	-	-	-	-	1.21	-
Unskilled labourer	23.59	-	26.03	-	39.13	-	3.24	-	20.65	-
Semi-skilled labourer	13.48	-	16.44	-	13.04	-	1.61	-	11.34	-
Skilled Tradesman	5.62	-	1.37	-	-	-	14.52	-	6.07	-
Factory operative	3.38	3.03	-	11.54	-	-	-	-	1.21	5.79
Admin. Officer/ trainee	23.59	3.03	21.92	11.54	17.39	-	11.29	-	19.43	5.79
Prof./Managerial/ Tech. & High Admin. worker	-	-	1.37	-	-	-	37.09	37.5	9.72	4.35
Entrepreneur	-	-	-	-	-	-	9.68	-	2.43	-
Machinist	-	3.03	-	42.31	-	50.0	-	-	-	18.84
Typist	-	21.21	-	11.54	-	-	-	-	-	14.49
Total in Sample	89	33	73	26	23	2	62	8	247	69

Source: Avarua Employment Survey

It is clear from this Table that males are concentrated in the labouring, clerical and administrative areas while females are predominantly shop assistants, clerical workers (including typists) or clothing machinists. It will also be noticed that the concentration in unskilled labouring occupations is most marked among Northern migrants. On the whole it is true to say that these migrants have come from societies where there was little opportunity to acquire urban skills or qualifications and many have not spent a sufficiently long period on Rarotonga to have acquired them. The opportunity to learn, however, entails more than just a protracted period of residence in the town as there has been very little development of the industrial, professional or technical sector of the town's economy thus severely limiting occupational alternatives. As mentioned in an earlier chapter the position of the Cook Island Administration as a major employer of labour is reflected in the very high proportions of workers engaged in clerical, administrative and labouring occupations. Table 3.26 which records the various sectors of the economy further supports the conclusion that the local Administration serves as the major employer of town workers. More than 70 percent of all males and 52 percent of females were employed by the Administration in one branch or other. Although the sample groups are small there is considerable similarity in occupation and sector of the economy for all Cook Island males. Most employed males were concentrated in the Administrative sector together with the Public Works and Health Departments. The majority of workers in these sectors were clerks, administrative assistants, policemen, messengers, drivers as well as administrative trainees, public health and mosquito control inspectors while the P.W.D. mainly employed skilled and unskilled labourers and tradesmen. Rarotongan and Southern migrant males have a very similar occupational and employment distribution, a fact which is recorded by the low rates of occupational and industrial dissimilarity in Table 3.27. Northern migrants have a slightly higher rate on this Table by virtue of their greater concentration in the labouring sector chiefly with the U.S.S.Co. In spite of this, Northern

TABLE 3.26
SECTOR OF ECONOMY
(%)

	<u>Rarotonga</u>		<u>Southern Migrants</u>		<u>Northern Migrants</u>		<u>Other</u>		<u>Total</u>	
	M	F	M	F	M	F	M	F	M	F
Cook Island Administration	48.35	54.55	52.05	30.77	34.78	50.0	48.39	50.0	48.18	44.93
USSCo Ltd.	11.24	-	10.96	-	30.44	-	4.84	12.5	11.34	1.45
Island Foods	4.49	3.03	6.85	11.54	8.69	-	1.61	-	4.86	5.79
Clothing Factory	-	3.03	4.11	38.46	-	50.0	3.23	-	2.02	17.39
Trading Store	5.62	39.39	4.11	3.85	17.39	-	12.90	12.5	8.09	21.74
Handicrafts	2.25	-	-	-	-	-	1.61	-	1.21	-
P.W.D.	17.98	-	13.69	-	-	-	24.19	-	16.59	-
Health	7.87	-	5.48	11.54	8.69	-	3.22	25.0	6.07	7.25
Other	2.25	-	2.74	3.85	-	-	-	-	1.62	1.45
Total in Sample	89	33	73	26	23	2	62	8	247	69

Source: Employment Survey

TABLE 3.27

INDEXES OF OCCUPATIONAL & INDUSTRIAL DISSIMILARITYSECTOR OF ECONOMY

<u>Birthplace</u>	<u>Southern Migrant</u>		<u>Northern Migrant</u>		<u>Other</u>	
	Male	Female	Male	Female	Male	Female
Rarotongan-born	13.026	59.3239	36.0209	46.9696	16.7836	37.4999
Southern Migrants			37.8212	31.5383	20.9014	54.6153
Northern Migrants					42.6379	25.00

OCCUPATIONAL STATUS

	<u>Southern Migrant</u>		<u>Northern Migrant</u>		<u>Other</u>	
Rarotongan-born	14.9203	56.2934	21.2577	69.697	55.6485	72.7275
Southern Migrants			13.1017	46.1196	58.5455	88.4956
Northern Migrants					61.2865	50.00

Source: Avarua Employment Survey 1966/67

migrants are, like their Southern counterparts heavily concentrated in the Administrative sector. Characteristically, a substantial proportion of the European population are found in professional/technical and higher administrative occupations with smaller concentrations in the clerical, skilled trades and entrepreneurial sectors. This occupational distribution accounts for their high dissimilarity rate with local groups.

The picture presented by employed females in the town is rather different and highlights some of the differences between migrants and local groups. Rarotongan females are almost exclusively concentrated in the two occupational categories of clerical worker-typist and shop assistant whereas Southern migrants are primarily employed as clothing machinists. The differences between these two groups is shown by the high dissimilarity indexes. The concentration of Southern females in the clothing industry illustrates very well the open labour market situation that exists within the town and the principle of family and kin recruitment to fill vacancies. Very few labour vacancies are announced in the press, even when labour is urgently needed. Rather, there is reliance on the kinship system to provide applicants as the need occurs. In this way an employee will introduce a relative to fill a vacancy when it arises. By this means a tight knit 'gang' of related workers is built-up. There is some evidence to suggest that the same system allows recruitment of labour for most of the town's major employers.

Although the sample numbers are small and broad conclusions must be tentative some important points emerge. The dependence on labouring occupations is much greater among Northern migrants than other groups. Almost 50 percent of all employed Northern migrants were employed as casual labourers with the USSCO or as general labourers with the Administration. This seems to be fairly consistent with these migrant's desire to earn some money and return home.

The Level of Unemployment

It is extremely difficult to determine the level of unemployment within the town. The very strong kinship ties existing within the society together with the frequent arrival of money orders, food and other gifts from overseas kin means that a person can be virtually unemployed, perhaps engaging in intermittent labour on a citrus plot or food garden while being fed and accommodated by kinsfolk. It is not unusual for an elder daughter to remain at home and take care of younger children and household duties rather than take up employment. Such people receive little cash remuneration for their work other than food and gifts due to them under social custom. The 1966 census collected material indicating the extent to which persons expressed a desire to engage in salaried employment. The degree to which those who expressed such a desire would follow up with action if jobs were available and the extent to which the question in the census was fully understood is of course indeterminate. In Avarua in 1966 there were 70 males and 54 females who were unemployed and expressed a desire to work full-time if such a job was available (on file, Premier's Department)*. These figures represent between five and ten percent of the work force respectively. If, however, these figures are added to persons in part-time employment and to those being assisted by relatives then the numbers for Rarotonga increase to 638 males and 260 females, 26 percent and 25 percent respectively. These figures suggest that the level of unemployment is high even though it is masked or hidden by the economic and social security of the kinship system. In October of 1967 the Cook Islands Government set up an Employment Bureau on Rarotonga to provide, largely on an informal basis, a pool of labour for contingency work. The additional function of hiring out labour to private employers was also undertaken. The daily rate of pay for casual labourers employed by the Bureau in 1967 was \$2 a day. Prior to being eligible for work in the

* In 1966 there were a total of 116 males and 90 females on Rarotonga in this category.

private sector a registered labourer was required to work with the Bureau's gang on beachfront reconstruction and beautification projects. Only those men who were regarded as reliable and industrious were retained on the Bureau's files. The number of persons registered with the Bureau varies according to the availability of seasonal work such as orange picking and replanting or waterfront labouring with the USSCo. The emergence of the Bureau is a significant event for it represents the first departure from a fluid labour market which relies mainly on kinship and personal ties to locate vacancies and place applicants.

MIGRANTS IN TOWN

The absorption and settlement of Outer Island migrants is a regular feature of town and Rarotongan life. The very activities of finding accommodation, of seeking work for the first time, of struggling to acquire a few occupational skills and public service qualifications, of arranging for wives and families to follow, or arranging the necessary berth and fare to New Zealand and of simply getting acquainted with the urban environment and its people are major preoccupations for the stream of new arrivals. Conversely, the meeting and welcoming of new arrivals, providing them with accommodation and generally assisting them in the various stages of urban familiarisation are regular aspects of the everyday life of many of the town's residents. The general process of selection and sorting has created what might be termed 'natural areas' within the town and the very existence of these areas has become an important factor in the selection and distribution of new arrivals.

Migration to Avarua has been unusually selective of persons who had previous experiences of living away from their home village* or who came from families who had some history of migration. In the three village sample, more than 41 percent of Southern migrant household heads and 51 percent of Northern migrants had lived on another Island in the Group (See Table 3.11). In addition, approximately one-quarter of all Southern migrants had visited or worked in New Zealand. The influence of labour recruitment to Makatea was shown to be of considerable significance as a 'loosening-agent' in encouraging migration to Rarotonga. Almost 30 percent of Southern households and 12.5 percent of Northern migrants in this survey could state in 1967 that their decision to move to Rarotonga was influenced or determined by a period of labour

* Pons found the same to be true in his study of Stanleyville, see Pons, 1956.

spent on Makatea some time between 1942 and 1955, and an even larger proportion of households included a member or members who had worked on Makatea. For Mangaian and Maukean the contact with Makatea labour was a very significant factor in encouraging migration to Rarotonga. The Outer Island migrant, especially those from the more isolated Northern Atolls, must on arrival in Avarua learn another mode of living in order to adjust to a very different environment. This may involve what Mayer calls "cultural urbanisation" (a preference for urban ways and institutions) and/or "structural urbanisation" (putting down permanent roots in the town) (See Mayer 1971:283) or it may involve a period of temporary residence before returning to the village or migrating to New Zealand. On the other hand, some migrants may resist change and continue to live as much as possible within the traditional village system. All migrants within Avarua have to act within a limited framework of economic and social necessity. In economic terms it is often necessary to find a job so as to earn money. In social terms, the dance hall, cinema, organised sport, drinking and well stocked shops all offer points of social contact with the wider community. All this of course demands more numerous and wider acts of choice than does traditional village life. Not only does Avarua provide a far wider variety of opportunities and conditions, but distance from the home village increases the migrants personal freedom. This requires something of a re-orientation to the new conditions. When the migrant reaches Avarua he learns that many of the traditional bonds are no longer available to him. He is no longer in a close-knit, tightly-organised community and the sudden release from tightly prescribed traditional ways and values may leave a vacuum which can only be filled by new and different ones. This transition may also manifest itself in increased social deviancy and disorientation such as petty crime, delinquency, venereal disease and high illegitimacy rates as well as a marked increase in some medical disorders. Entry into a new economic system characterised by wage labour and the per-

sonal profit motive requires added versatility for handling everyday problems and may necessitate considerable readjustment to a new system of routines, rights and obligations. It may be sometime before the migrant comes to fully realise that town life is not controlled by individuals but by government organisations, officials and business concerns. In some cases, especially in the case of Northern migrants, there may be a withdrawal into the security of one's own ethnic group and personal dealings with outsiders largely restricted to dealings via the mediation of respected long established residents from the same Island. To some extent this situation exists for Avarua's Pukapukan community which maintains a certain residential and social exclusiveness.

The process of frequent arrival, exodus and return (especially in the case of Northern migrants) often results in the introduction of a new kind of town-dweller, the temporary visitor whose presence and involvement in the social and economic life of the town is marginal. Avarua is to a certain extent partly made up of such migrants who are only segmentally and temporarily involved in the urban way of life. Many of these temporary migrants are primarily orientated away from the town often to a rural village where the traditional way of life is only slowly being displaced by modern values and social transformations stemming from urban influences on Rarotonga. These migrants often see the town through rural eyes and are largely unaware of the requirements of time, money and urban skills, of the compromises in accommodation, and of the subtle changes in activity and organisation that must be made.

THE MIGRANT SURVEY

Reasons for Migration

Household heads in the three village survey were questioned on their reasons for movement to Avarua. Respondents were encouraged to give only the major reason for their migration. The outstanding feature of Table 4.1 is the emphasis on social motives - many moved to the town to see or stay with kinsfolk and thereafter decided to

stay on, while a smaller number moved for their children's education or for medical treatment. Economic motives were also important. Many migrants explained their migration in terms of a search for wage employment and a better standard of living. Career interests brought a few migrants to the town while some simply came to look around. Sixteen households further indicated that they had moved to Avarua as the first step in a chain movement to New Zealand even though in most cases the intended move to New Zealand was not expected to take place for some time. The large number of household heads whose reason for moving to Avarua was that they accompanied their parents gives some indication of the long standing duration of migration to the town.

In addition to the three village survey a brief survey of migrant households in three localities of the town was undertaken. Eighty-two households were selected in Pue, Tutakimoa and Upper Takuvaie. Pue and Tutakimoa are the two most visible areas of migrant settlement within the town mainly because of the number of small hastily erected dwellings housing mainly Islanders from the Northern Atolls. Although these two areas have experienced their major influx of settlers in the last ten years, in some cases there were Outer Islanders living in these localities as early as the 1920s. Pue, situated on the eastern fringe of the town has been mainly settled by Pukapukans many squatting illegally or renting their land. Tutakimoa on the other hand represents the largest cluster of migrant homes in the town and is much older in origin containing some of the town's poorest and most depressed housing. Much of Tutakimoa is low-lying and the habit of building new pit latrines alongside old closed ones represents a definite health hazard as much of the area is subject to periodic flooding. The first Manihikian migrants to settle permanently here did so in the period just prior to the First World War and by 1931 there was a small well established community of Northern Islanders. Today the area is characterised by an intermixture of Islanders from Manihiki,

TABLE 4.1
REASONS FOR MIGRATION TO RAROTONGA
 (%s)

	<u>Southern</u> <u>Migrants</u>	<u>Northern</u> <u>Migrants</u>	<u>Total</u>
Husband Transferred	5.03	5.36	4.65
Theological Training College	1.26	-	0.93
For Work	20.12	23.21	20.93
Holiday/Curiosity	5.66	3.57	5.12
To See Relatives	21.38	33.93	24.65
En Route to New Zealand	8.8	3.57	7.44
For Children's Education	10.69	8.39	10.23
To Join Family	1.26	-	0.93
For Medical Treatment/Other	3.14	3.57	3.72
Accompanied Parents	22.64	17.86	21.39
Number in Sample	159	56	215

Source: Social Survey of Three Villages

Rakahanga, Penrhyn and Palmerston as well as some Southern-born groups. Upper Takuvaine by comparison, has experienced a noticeable influx of Southern migrants in the last five years.

Household Constitution

In the 82 households sampled live 821 people or an average of 10.01 (SD 4.97) per household. The number of children under 15 years averaged 4.45 (SD 3.67), adults between 15 and 55 years averaged 4.78 (SD 2.67) and elderly people 0.61 (SD 0.55) per household. Some households contained as many as ten children under the age of 15 years and the number of children in the middle 50 percent of the distribution ranged from 2.5 to 5.6. The comparatively large number of adults per household is worthy of comment. The number of these adults ranged from 0 to 13. More than six adults were to be found in 41 percent of the cases. This large number is undoubtedly related to the absorption of adult kin and friends into the urban household. On analysis the mean number of nuclear families per household was found to be 1.195 (SD 0.551) and the 82 households supported an additional 326 members. The mean number of additional members per household was 3.976 (SD 3.8) and the survey revealed that households were most commonly enlarged by the presence of nephews, nieces, grandchildren, adult siblings and elderly parents.

Housing

It is in the realm of housing and housing facilities that Avarua's immigrant groups are most disadvantaged particularly migrants from the Northern Atolls. Approximately 50 percent of all houses in the survey were constructed of temporary or makeshift materials representing a mixture of introduced and indigenous building materials such as packing cases, flattened tin drums, hard-board sheets, roofing iron sheets, cardboard, old sacks, coral boulders, wood strips and kikau fronds (See Plate VIII). Very few houses were constructed of permanent materials such as concrete and weatherboarding, with the exception of some older established Southern migrant dwellings. The majority of the houses possessed iron roofs, although in some cases secured by boulders or rope.

Floors were generally built of ill-fitting wood lengths or coral chips and pebbles. The ramshackle and dilapidated nature of many of these dwellings reflects among other things the insecure land tenure system whereby migrants often have no firm legal right to occupy their piece of land and thus refrain from erecting a more permanent dwelling for fear of eviction. It also represents the depressed income structure of many of these groups and the common practice of overcrowding their households with visiting kin and friends. As can be seen from Table 4.2 the majority of households in the sample were without even the most basic sanitary and domestic facilities. Apart from a washing machine or refrigerator the major deficiency was that almost 63 percent of the houses were without electricity, 80 percent had no inside piped water and of those with access to an outside tap in 23 percent of all cases it was located further than 20 yards from the main dwelling unit. Significantly 34 percent of all households were dependent on a neighbour's water supply although in a few cases water had to be carried in buckets from a nearby stream. Twelve percent had no toilet of their own while 34 percent shared shower and washing facilities with some other household. Cooking was normally carried out in the open using the traditional umu or in some cases on a primus or small portable kerosene burner. The number of rooms in migrant dwellings ranged from one to eight with a mean of only 3.28. The number of beds ranged from one to ten with a mean of 4.6. Given an average of 10 persons per dwelling this means that a large number of occupants have to share beds or sleep on bedrolls on the floor. Per capita floor space was a very low 31.973 square feet which compares very unfavourably with the results recorded in Chapter II. The depressed status of much of Avarua's migrant housing can further be illustrated by comparing migrant statistics with figures for the town as a whole (Table 4.2). This comparison shows the much less favoured position of migrant groups within the town. Chapter II has already stated that migrant groups were living close to 2.8

TABLE 4.2A COMPARISON OF MIGRANT HOUSES WITH AVARUA TOTAL

(%)

	<u>Migrant Survey</u>	<u>Total Avarua</u>
Closed European Style Housing	39.02	52.81
Temporary Style House	50.0	26.67
Poor/Very Poor Condition Housing	70.73	21.78
Without own Water Supply	18.29	3.63
Own Shower	65.85	74.05
With Electricity	37.8	45.01
Cooking by Umu	24.39	35.75
Pit Latrine	80.49	78.22
No Toilet	12.19	1.09
Share Toilet	18.29	12.88
Own Handbasin	45.12	45.37
Flush Toilet	7.32	19.06
Mean Size of Dwelling	290.57	540.76
Mean Per Capita Floor Space	31.973	63.396
Mean Number of Rooms	3.286	4.05
Mean Number of Beds	4.6	6.053
Persons Per Room	3.03	2.575
Mean Number of Occupants	10.01	8.53

Source: Housing Survey and Migrant Survey

persons per room compared with only 1.87 for the Rarotongan population. This particular survey recorded an even higher figure of 3.03 or almost double the Rarotongan rate. There seems little doubt that migrants have filled their houses with a large number of persons. This survey also indicates that many migrants in the town are living in depressed and often marginal conditions without many of the more normal urban facilities. Furthermore, the custom of extending hospitality and accommodation to visiting kinsfolk has placed considerable strain on the migrant's available resources. The fact remains, however, that this sort of housing represents a rationalisation of an unfavourable situation and the mobilisation of what meagre resources are available to individual migrants. To this extent it is an example of a modest private solution of the housing shortage in an environment where public bodies possess neither the finance nor the inclination to act.

Migrant Employment and Income Patterns

In the total 82 households sampled, 23 percent of all inhabitants were currently employed in the town, 13 percent engaged in home duties, 16 percent currently unemployed and 44 percent of school or pre-school age. In addition, three percent were classified as retired. If only working age adults are considered* then the proportion currently employed increases to 43 percent and the percentage of unemployed to almost 28 percent. The large number of unemployed and those engaged in 'home duties' is of considerable significance. It means that for every person working in these households there were three dependents, one adult and two children. The large number of unemployed adults reflects the number of temporary visitors in these households. The very limited skills migrants have to offer the urban labour market can be seen in Table 3.25. The majority of males were concentrated in the unskilled labouring sector of the economy with a smaller concentration in

* That is, adults over the age of 15 and under the age of 60 years.

clerical jobs. Most worked for the Administration although a substantial number of Northern migrants worked for the USSCo Ltd. as wharf labour. The few females that were employed usually worked as machinists in one of the clothing factories or as private domestics or house girls.

The mean 'take-home' wage of all those employed in migrant households was only \$13.48 (SD \$7.52) and mean total household income was \$25.05 (SD \$17.19). The total household income figure is extremely low considering that most households have ten or more mouths to feed. To some small measure Islanders compensated for a depressed income level by receiving foodstuffs from their home village as well as food parcels and money remittances from kinsfolk in New Zealand. This latter item, however, only contributed a mean \$15.78 (SD \$31.07) every three months and so did not greatly augment household income. Foodstuffs sent from village kin were another matter entirely, and most households could look forward to a fairly regular supply from this source. In addition to making do on a very restricted cash income, most households were themselves remitting small amounts of cash to rural kin. Although the amounts sent were usually very small (mean monthly remittance was only \$2.16 (SD \$5.18); most urban dwellers recognised a definite obligation to assist their village relatives whenever requested to do so. Out of their total weekly income of \$25 most households spent \$11.26 (SD \$5.66) on foodstuffs and \$3.60 (SD \$3.41) on 'luxuries' such as tobacco, beer and film-going. Total weekly expenditure only came to \$17.02 (SD \$10.63) well within the weekly budget. This sum does not, however, take into account remittance to kinsfolk or expenditure on items other than those mentioned. It is surprising how many households continue to exist on such low weekly income levels. Other Islanders within the town can compensate by having a comparatively large number of wage earners in the household or perhaps by cultivating food or cash crops. Neither of these alternatives seem possible for many migrants. In the first place, employment in the town is very limited and temporary urban dwellers stand little

chance of obtaining a job. In the second place, many migrants especially those from the Northern Atolls, have no access to Rarotongan land or for that matter any real comprehension of land-use techniques on the Island.

Urban-Rural Links

In economic terms one of the most important aspects of the rural-urban movement to Rarotonga is the counterflow of money foodstuffs and goods which characterises the migration flow. As shown in Table 4.3, 75 percent of all migrant households in the survey were regularly remitting small amounts of money, foodstuffs and other goods back to kinsfolk in the home village. In return, many households were frequently receiving Island foodstuffs from the Outer Islands. In the case of Southern migrants this was usually mangoes, bananas, taro, pineapples and coconuts, whereas Northern households frequently received packages of dried fish, shellfish, coconuts and plaited mats. It was very rare for a ship to arrive from the Outer Islands without bringing large consignments of foodstuffs for Avaruan households. Although the amount of money remitted to the village was generally small, most migrants recognised a commitment to send such gifts at least once or twice a year or when requested to do so. The frequency of remittances was found to vary inversely with distance from the town* and in the case of the more isolated Northern Atolls, gifts and money were often sent back when a visiting relative returned to the home village.

Undoubtedly one of the strongest links with the home village is seen in the frequent arrival of relatives and friends to stay either temporarily or permanently with their town-based kin. Just over 50 percent of all householders in the survey with Outer Island links recorded that a relative or relatives had arrived to stay within the last nine months and in the case of Southern households the proportion was very much higher.

* Statistically significant at the .01 level.

TABLE 4.3.

LINKS WITH HOME VILLAGE

	Revisited Home Village in last 18 months		Relatives Visited in last 9 months		Remitting money/foodstuffs etc. to village	
	F	%	FF	%	F	%
Southern Migrants	15	53.57	20	71.43	22	78.57
Northern Migrants	14	40.0	16	45.71	29	82.86
Rarotongan/Southern	-	-	1	16.66	3	50.0
Rarotongan/Northern	1	25	2	50	1	25
Other/Northern	1	33.33	2	66.66	1	33.33

FREQUENCY OF REMITTANCE TO HOME VILLAGE

	Southern Migrants	Northern Migrants
Once or more monthly	5	1
4 - 11 times a year	6	7
1 - 3 times a year	9	11
less than once a year	2	6
when needed or asked for	3	7
not stated	0	2
Total Remitting	25	34

Source: Survey of Migrants, Avarua.

The interrelationship between town and village is further sustained by the frequency of visits home by town-based migrants. More than 53 percent of Southern household heads had returned home for a short visit or holiday at some time within the last 18 months. In the majority of cases such visits were usually arranged to coincide with annual or Christmas holidays. The distance and inadequate and irregular shipping links with the Northern Atolls makes it extremely difficult for many Northern migrants to return for short visits but even here a large proportion had been home (See Table 4.4).

THE PROBLEMS OF TOWN LIVING

Counterbalancing the various attractions of the town many migrants thought nostalgically of their home village for the social and economic security of family life and abundance of food. Many, however, stressed that despite these advantages a return home would involve them in intolerable and onerous situations. They considered that after a period of 'civilised town life', village life was 'slow', restricted and burdensome. When asked whether or not they preferred to remain in Avarua, 25 percent and 32 percent of Southern and Northern migrants respectively in the three village survey indicated that they would like to return to their home village given the opportunity while a very large proportion indicated their desire to emigrate to New Zealand, indicating the very strong attraction that that country holds for most Islanders (Table 4.5). Only a little over one-quarter of migrants were content to remain in the town. In response to the question "what do you miss most in Avarua?" most migrants expressed nostalgia for the home village environment, for their kinsfolk and for the family land (Table 4.6).

Although the lure of Avarua is very strong, urban life has produced its dissatisfaction and discontentment. Many migrants suffer some disillusion with town conditions while most exhibit some kind of emotional reaction. The difficulties of town life were widely acknowledged. The major protest levelled against urban living

TABLE 4.4.

MIGRANTS LINKS WITH HOME VILLAGE AND NEW ZEALAND

	Total Households	Food etc. from Home Village		Money etc. from N.Z.		Growing Food Crops		Lived or visited other Islands		Lived on or Visited N.Z.	
		f	%	f	%	f	%	f	%	f	%
Southern Migrant	28	21	75.0	9	32.14	17	60.7	15	53.57	10	35.71
Northern Migrant	35	22	62.86	14	40.0	1	2.86	16	45.71	9	25.71
Rarotongan/ Southern Spouse	6			2	33.33	6	100.0	2	33.33	1	16.66
Rarotongan/ Northern Spouse	3	2	66.66					2	66.66	1	33.33
Fanning/Tahiti/ Northern Spouse	4	2	50	1	25			1	25	1	25
Other	6	1	16.66	1	16.66	4	66.16	3	50.0	1	16.66
Total	82	48		27		27		39		23	

Source: Survey of Migrants, Avarua.

is that against a wholly exchange economy in which most things must be paid for. In many cases it is an overwhelming experience for many former atoll and village dwellers to discover that common everyday foodstuffs are items of commerce in the same way that imported foodstuffs such as tinned meats, tea, sugar and flour are in the village. Northern migrants have little opportunity to engage in fishing in the town and would not know how to cultivate local food crops even if land was available. As one recent arrival from Pukapuka had it, "In Avarua there is no land, food has to be bought and is expensive. Rarotongans care nothing for us they are more interested in drinking beer and making money". Shortage of money or of wage-paying employment may in some cases mean real personal and household difficulty in the town. Wage-earners often have to support many sick, elderly and visiting relatives and those planning to return to the village often hoard their money so as to be able to purchase a few goods to take back with them. In Northern households the complaint most frequently heard was of the lack and excessive cost of foodstuffs and this was obviously a source of tension in large extended households (Table 4.7).

Half the Rarotongan household heads in this survey were completely satisfied with town conditions. The remainder were largely concerned with the inadequacy or lack of essential urban services such as water and sewerage or with everyday problems of noise, traffic density and overcrowding. A much smaller proportion of Southern migrants expressed complete satisfaction with urban conditions. The majority of complaints levelled at the town by Southern migrants were directed at the cost of foodstuffs, lack of employment opportunities and lack of access to land.

Northern migrants, by contrast, possessed the lowest rate of urban satisfaction, in part brought about by the problems of adjustment to what is a strikingly different environment, physically and socially to their home Island. They pass not only from an

TABLE 4.5

RESPONSE TO QUESTION: "IF GIVEN THE OPPORTUNITY WOULD YOU
REMAIN IN AVARUA OR RETURN TO YOUR VILLAGE?"

(%)

	<u>Southern Migrants</u>	<u>Northern Migrants</u>
Would Return to Village	26.16	37.5
Would Emigrate to New Zealand	46.54	32.14
Content to Remain in Avarua	28.3	30.36

Source: Social Survey of Three Villages.

TABLE 4.6

RESPONSE TO QUESTION: "WHAT DO YOU MISS
MOST IN AVARUA?"

	<u>Southern Migrants</u>	<u>Northern Migrants</u>
Family and Relatives	30.9	14.28
Home Village	23.9	33.93
Own Land	29.56	39.28
Food Crops	10.69	19.71
Other	5.66	1.79
Number in Sample	159	56

Chi-square calculation

Southern versus Northern Migrants $\chi^2 = 76.48$ df = 4 p < .001

Source: Avarua Migrant Survey.

extremely isolated subsistence economy to one dependent upon outside contacts and wage labour but also from a poor society to one in which affluence is more readily apparent. It is this transition to a cash-orientated society which is really the cause of much fundamental strain, even though migrants saw their basic problem as being one of excessively high living costs. Money problems, especially high food costs are intensified for Northern migrants because of their larger household structure and the frequent arrival of relatives. Allied to this, many migrants found difficulty in adjusting to the social routines of the town. To a large extent they are ill-prepared for urban employment and are not used to work routines, punctuality and the handling of money and goods. They also frequently claim that the apparent social exclusiveness of Rarotongan society precludes all but a few from participating fully in the social activities of the town.

The restricted access of Northern migrants to land on Rarotonga is indicated by the very small proportion of households in the migrant survey cultivating subsistence or cash crops. By comparison, more than 60 percent of Southern migrant households were engaged in some form of agricultural undertaking (Table 4.4). Most migrant households were growing less than half of their total food requirements indicating that most households had to rely on kinsfolk or purchasing foodstuffs from local sources. On the other hand, Rarotongans married to migrants grew a much larger proportion of their own food requirements.

Social Problems and Deviancy

There is no question that some migrants see Avarua as a place of financial worry and of personal and household crisis. Life in the village might be very poor or even deprived by comparison but residents are rarely faced with demands that are beyond them and the cohesiveness and the social security of kinship and village society provides a system of communal welfare and security.

TABLE 4.7
PERCEPTION OF URBAN PROBLEMS
 (%s)

<u>Main Problems</u>	<u>Rarotonga</u>	<u>Southern Migrants</u>	<u>Northern Migrants</u>
Cars/Traffic/Noise	6.78	5.66	3.57
Water Supply/Sewage System	10.17	10.06	1.79
Cost of Food	8.47	25.79	51.79
Type of Food	-	5.66	3.57
Lack of Jobs	8.47	13.21	3.57
No Land	-	16.35	30.36
Shortage of Money & Other	6.78	3.77	-
Completely Satisfied	50.0	16.35	5.36
Not Stated	9.32	3.14	-
Number in Sample	118	159	56

Chi-square calculation

Outer Island migrants versus Rarotongans $\chi^2 = 246.36$ df = 16
 p = $<.001$

Source: Migrant Survey

By contrast, migrants within Avarua are faced with a much more complex environment involving numerous acts of choice and requiring a number of social and economic adjustments. In many cases overcrowding of households, shortage of food and a marginal cash income may produce frustrations, tension and deviant behaviour.

The relaxation of tight family controls by the splitting up of family groups in the migration process may also allow young people a much greater deal of freedom. Whatever the cause, migrants in Rarotonga exhibit a much higher criminality record than local groups. Table 4.8 shows the conviction rates for the various ethnic groups on Rarotonga in 1967. In this year, crimes, and convictions were only recorded by the birthplace of the offender which makes it highly probable that many of the Rarotongan-born convictions were in reality recorded against the offspring of Outer Island parents. To this extent, the 1967 conviction rates as shown considerably understate the significance of Outer Island crimes. Even so, it is apparent from these figures that some migrant groups are contributing disproportionately to the Rarotongan crime rate. Manihikians, for example, had the highest conviction rate in 1967 (174.6) followed by Rarotongans (134.8) and Mangaian (108.6). Other tentative conclusions that can be drawn from these statistics are as follows -

(i) For 'offences against property', five migrant groups have rates in excess of the Rarotongan-born element. Manihikians, with a rate of 71.43 (more than three times that of Rarotongans) are the most significant.

(ii) For 'offences against the person', mainly assault and sexual crimes, migrant groups again have rates in excess of the local-born element.

(iii) Finally, apart from Manihikians, Rarotongans have slightly higher rates for vagrancy, drunkenness and illegal brewing.

The majority of crimes in 1967 were of a petty nature, mostly involving traffic offences, animal trespass and the brewing

TABLE 4.8

CONVICTIONS PER 1,000 MALES AGED 10 AND OVER RAROTONGA, 1967

Birthplace	Offences against property	Offences against the person	Vagrancy, Drunkenness	Traffic & Other	Total Rate
Rarotonga	21.33	13.17	13.8	120.45	134.88
Aitutaki	34.88	0	11.63	46.51	69.77
Mangaia	29.96	18.73	11.24	63.67	108.61
Mauke	21.58	7.19	0	28.78	50.36
Atiu	21.09	16.88	4.22	59.07	75.95
Mitiaro	12.35	0	0	0	12.35
Manihiki	71.43	23.81	15.87	103.17	174.6
Pukapuka	0	17.24	0	16.95	17.24
Penrhyn	0	10.87	0	43.48	32.61
Palmerston	0	0	0	0	40.0
Rakahanga	0	15.38	0	0	15.38
European	0	0	0	23.47	23.47

Source: Police Dept. Records, Rarotonga 1968

of bush beer. Of the 403 crimes investigated by the Police Department in this year, two-thirds were of a minor nature involving such offences. Of the remaining one-third, 69 were 'offences against property', 37 offences against the person' and 31 for vagrancy, drunkenness and illegal brewing. Although Rarotongans were responsible for two-thirds of all offences in 1967 their proportional share of serious crimes was much lower, 49 percent in the cases of property crimes and 57 percent in cases including assault. It would appear, therefore, that there is a strong correlation between Outer Island migrants and major crimes. Most petty theft and burglary crimes were committed by the youthful immigrant sector of the Avaruan community and mostly involved thefts of food and small amounts of money.

From the figures given in Table 4.8 it could appear that Manihikians are the most poorly adjusted migrant group on Rarotonga. Their conviction rates for all crimes except traffic offences, are considerably in excess of all other groups. At the other end of the extreme, Pukapukans, Rakahangans and migrants from Mitiaro have very low conviction rates.

The probation officers report for 1968 confirms the conclusion that migrants contribute disproportionately to the crime rate. In the words of the report "..... the most committed offence by those released on probation is theft. This is mainly due to unemployment among unskilled classes of people who in most cases have come to Rarotonga from the Outer islands, settled in poor homes and possess no land ..." (Probation Officers Annual Report, 1968:2). The report also suggested that most of those on probation were the products of broken or disturbed homes, or homes where children do not get correct discipline, perhaps because one or both biological parents are in the home Island or in New Zealand. Finally the report suggested that illegitimate children formed a significant proportion of those on probation.

There is also some evidence to suggest that urban conditions and the socio-economic stresses resulting from a changing way of life have been instrumental in producing a variety of disorders including high blood pressure, vascular disease and diabetes. A survey carried out in 1965 by the Medical Research Council of New Zealand in conjunction with the Department of Health investigated the incidence of certain disorders in the town (Medical Research Council et al, 1966). Two groups of Islanders were selected in an effort to represent the two extremes of the traditional-modernisation continuum. In the first case, the entire adult population of Pukapuka was selected as being representative of an isolated traditionally orientated people still dependent on a subsistence style economy and largely excluded from cash dealings and the material culture of the West. In the second case, a sample of 480 adults who had lived for ten years or more under town conditions in Avarua were selected as being representative of a group committed to a cash economy through an involvement in wage employment and commercial agriculture. While the Pukapukan group was generally isolated from outside contacts and had experienced relatively little change in their traditional social structure and tempo of life since Beaglehole studied their community in 1935 (See Beaglehole, 1938), the town group was on the threshold of modernisation, being involved in a cash economy with ready access to European goods and foodstuffs.

When these two groups were compared, a number of significant differences appeared in a variety of medical disorders including high blood pressure, vascular disease, obesity and diabetes. Firstly, the blood pressure of town dwellers showed a marked increase with age and in both systolic and diastolic pressures females had much higher rates than males by the age of 40 years. For the age group 50 to 59 years the mean systolic rate for females was 170.2 (SD 38.2) and even higher for all age groups above 60 years. If we accept a figure of 160/95 as indicating a significant degree of hypertension then there is evidence to suggest that hypertension is

significant among female town dwellers. By comparison, the survey showed very little change in the mean blood pressure with age in the Pukapukan community and there was no significant difference evident between the two sexes.

Secondly, the survey also revealed a remarkable amount of obesity among town women compared with town males and Pukapukans. At least 46 percent of town females were classified as obese, including 21 percent as being grossly obese. The survey also indicated a much greater degree of Ischaemic heart disease and diabetes in the town than in the more isolated Pukapukan community.

There seems little doubt from the results of this survey that the stress and strain of urban conditions together with the various social and economic pressures occurring within the town population are factors of some importance in explaining the difference between the two groups. It is quite evident that social change is only marginal on Pukapuka and that Pukapukans are largely removed from the socio-economic problems facing urban dwellers. Yet while the environmental factor would seem to be of major importance other factors such as diet, life style and genetic factors must be taken into consideration. The diet patterns of the two communities varied markedly especially in the amount of salt consumed. Pukapukans used virtually no salt in their food in marked contrast to the town population who liberally consumed salt and salted tinned products. A relationship between salt intake and hypertension has been recognised for some time and could be a vital factor in influencing blood pressure rates between the two groups. The different life style patterns between the town and the Atoll community helps explain the degree of obesity among town females. The greater reliance of town households on wage employment, the enlargement of the household by relatives and the emancipation of many females from the physical commitments of agriculture and housework duties has meant that many older females have relatively little to occupy their time. There seems little doubt that these two groups represent Cook Islanders

living at different stages of material development and exposure to Western modern influences. The virtual absence of hypertension, obesity, vascular disease and diabetes among Pukapukans can most probably be explained by the slower tempo of atoll life, their communal existence, the sharing of responsibility and the emphasis on group activities such as sport, singing, dancing and church activities. On the other hand, the Avaruan community's much greater susceptibility to various medical disorders can be explained in terms of changed living and diet patterns and the socio-cultural stresses resulting from modernisation, social change and urban conditions.

The extent and significance of dislocation and personal deviancy resulting from urban living may be further documented by a survey of teenagers and young adults aged between 15 and 25 years living within migrant households carried out in 1969-70. Many of the young people were relatives and friends of the household's head staying temporarily in town as well as the head's immediate children. In Chapter III reference was made to the high incidence of illegitimacy among migrant groups. Such a situation was further substantiated by the number of young girls in the survey who had engaged in premarital relations and produced an illegitimate child (Table 4.9). The broad correlation between migrants and criminality has also been mentioned. A very large number of young people had some history of deviancy. While the largest proportion had only a traffic offence against their name, at least one-fifth of Northern males and only a slightly lower proportion of Southern males had a conviction or had been on probation for petty theft. In nearly every case the crime involved the theft of a small amount of money, foodstuffs or tinned goods. Such a situation seems to suggest a high degree of economic deprivation in many migrant households and this is supported by the large proportion of young people who reported shortage of money as being one of their major everyday problems. The cinema, dance hall and drinking school all occupy a large proportion of young people's

TABLE 4.9
RESULTS OF PERSONAL ADJUSTMENT SURVEY OF YOUNG
MIGRANT ADULTS (14-25) 1969-1970

	(%)*			
	<u>SOUTHERN</u> <u>MIGRANTS</u>		<u>NORTHERN</u> <u>MIGRANTS</u>	
	Male	Female	Male	Female
Biological parents not in household	50.0	43.24	51.85	45.24
Borne an illegitimate child	-	24.32	-	26.19
Conviction for petty theft	17.65	5.41	20.37	7.14
Traffic Offence	47.06	29.73	44.44	38.09
Other Conviction	14.71	-	9.26	-
Regular drinking school participant	44.12	5.41	18.52	-
Shortage of money	58.82	37.84	38.89	14.29
Regular attendance dance hall	38.23	27.0	25.92	28.57
Regular attendance cinema	52.93	54.05	35.18	40.48
Tension with parents/household head ^{*1}	38.23	21.62	22.22	9.52
Tension with others in household ^{*1}	17.65	2.7	9.26	4.76
Total in sample	34	37	54	42

* Adds to more than 100 percent because of multiple responses

^{*1} Arguments or frequent disagreement over money, personal freedom, distribution of food, chores, social activities etc.

Source: Survey of Migrants 1969-70.

time and energy and are looked upon as the main social outlets.

Finally, the responses of young people indicated a certain degree of tension existing within many households. In many cases clashes between young and old arose over disagreement and arguments over the shortage and spending of money, of personal freedom and of everyday routines. Many young people expressed frustration with the slow pace and conservatism of household decisions. Little of this discontent manifested itself publicly but frequently formed the topic of informal discussion among people of the same age group.

Despite the rapid decline in mortality rates over the last three decades infant mortality rates still remain at a fairly high level. In the period between 1950-1956 Rarotongan infant mortality averaged more than 108 deaths per 1,000 live births. By 1966 this figure had fallen to 53.45 (Files Justice Department 1950-1966). Such a rapid decline disguises the very significant urban-rural differential that exists within the Cook Islands. By 1966 infant mortality rates in the town were almost 36 percent higher than the Rarotongan figure and in the following year the differential was still marked. In this year, Avarua's infant mortality rate was 33 percent greater than that recorded for the Cook Islands as a whole (See Table 4.10). The most common forms of infectious diseases in the town are diarrhoea and respiratory infections which cause a high rate of morbidity and mortality in very young children. In 1966 and 1967 the most common cause of death in young children was gastro-enteritis and various forms of pneumonia and bronchial infections. The underlying causes of such infections must be the poor sanitation and depressed living conditions of many parts of the town. Most areas of the town are characterised by an inadequate water supply, the lack of a satisfactory and hygienic excreta disposal system, while particular migrant areas suffer poverty and overcrowding, malnutrition and insanitary living conditions. Although the birth and death statistics do not record the ethnic status of the parent they do record place of residence. In 1967 62 percent of the total

TABLE 4.10
INFANT MORTALITY RATES
RAROTONGA 1966-67

	<u>Total Live Births</u>			<u>Total Infant Deaths</u>			<u>Infant Mortality Rate</u>		
	Cook Islands	Rarotonga	Avarua	Cook Islands	Rarotonga	Avarua	Cook Islands	Rarotonga	Avarua
1966	823	464	264	44	22	17	53.45	47.4	64.3
1967	817	481	281	46	32	21	56.3	66.5	74.7

Source: Register of Births and Deaths, 1966-67

infant deaths in Avarua occurred to mothers normally resident in Pue, Tutakimoa or Upper Takuvaine suggesting that Outer Island migrant children were much more susceptible to infant infections than were the children of local groups.

FACTORIAL ECOLOGY OF AVARUAIntroduction

In an attempt to account for the fundamental dimensions in socio-economic data describing the variation in Avarua's population, recourse has been made to the statistical technique of factor analysis. The application of factor analysis to the study of urban areas is relatively recent and the total number of such studies is not large. In general, two types of studies may be isolated - those concerned with a large number of cities or communities and those investigating the internal structure of a particular city, either as a whole or attempting to see the structure of one major aspect of urban life and its relationship to other underlying factors. To the writer's knowledge no factor analysis has been carried out on a non-Western town the size of Avarua.

Outline of Methodology

The use of factor analysis for ecological research has been widely discussed in the literature (see Moser and Scott, 1961; Jones, 1965; Ahmad, 1965; Murdie, 1969; Berry and Rees, 1969; Abu-Lughod, 1969 and Timms, 1971). In recent years a group of studies labelled 'factorial ecology' have emerged chiefly under the direction of the Chicago Centre for Urban Studies (see Abu-Lughod, 1969: 201). These studies have as their prime objective the isolation of the factor structure of a population and a set of ecological variables and the relating of these factors to the spatial differentiation of the city. As a technique factor analysis has several advantages. In the first place it is a parsimonious technique which enables the reduction of a large number of intercorrelated variables to a relatively small number of independent factors. Secondly it provides a method for determining underlying patterns, regularities and basic structure of a large set of data describing urban areal variation. The purpose of factor analysis, therefore, is the location of the smallest number of independent factors which will explain the observed correlations. Each

factor represents a linear combination of the variables in the analysis and may be interpreted by factor loadings which indicate the relative contribution of each of the original variables to the factor structure. By use of factor scores for each of the areal units in the study it is possible to classify areas having similar scores on each factor.

Selection of Variables and Areal Units

In the study of Avarua, 60 variables, supposedly representative of socio-economic variation in the town in 1966 are derived from a wide variety of sources. The detailed social and housing survey of Avarua carried out in 1966 by the author provided information on housing as well as some social and economic data. Published and unpublished material from the 1966 Population Census together with information culled from the files of the Customs, Justice, Premiers, Social Development and Police Departments in Rarotonga provided additional material.

Each of the 60 variables selected was measured in nine village or sub-village areas making up the town of Avarua and the eastwards extension of Nikao so that the basic data for the analysis produced a 60 (variables) x nine (observations) matrix. The variables were chosen largely by reference to (i) what data was available or could feasibly be assembled, (ii) previous findings, and (iii) the author's intuitive knowledge regarding the socio-economic structure of the Avaruan community. Each of the variables was converted into a percentage or ratio form*.

Factor Analysis of 60 Socio-economic Variables

The factor analysis of the 60 socio-economic variables indicates that 95.94 percent of the variance in the 60 characteristics may be accounted for by seven factors or components. Each factor accounts for more than seven percent of the variance in the original data matrix, for factors comprising less than this may be a result of random errors in the

* For a full list of all variables used in this study see Appendix B.

TABLE 5.1FACTOR 1TRADITIONAL LIFE-STYLE FACTOR

<u>Variable</u>	<u>Loading</u>
No piped water	0.9441
Cooking with umu	0.7918
Persons per dwelling	0.7515
Percentage Cook Islander	0.7486
Percentage with Pit Latrine	0.7241
Percentage Males	0.6985
Percentage Dwellings Substandard	0.5964
Percentage Employed Males Agriculture/Fishing	0.5699
Percentage Males Earning less \$600 p.a.	0.5299
Percentage Houses Temporary	0.5097
Percentage Households Growing Subsistence Crops	0.4589
Percentage Illegitimate Births	0.4500
Total Percentage Southern Migrants	0.4386
Percentage Males Earning more \$2,000 p.a.	--0.4655
Percentage Males Professional/Tech./Admin.	-0.5069
Percentage Males Salary/Wages Full-time	-0.5617
Percentage households with Flush Toilet	-0.6660
Percentage Closed European House	-0.7886
Mean Size Dwelling	-0.7911
Percentage Houses Owned	-0.7978
Mean Number of Rooms	-0.8049
Percentage houses with electricity	-0.8206
Percentage European	-0.8465
Percentage cooking with electric/kero stove	-0.8986
Percentage born in N.Z.	-0.9214
Mean per capita floor space	-0.9751

data. Thus the socio-economic structure of Avarua in 1966 may be summarised by seven factors, with only a very small amount of the data lost in the process. In this study, although the factors were all fairly clearly interpretable in the initial factor matrix, a varimax rotation was employed to further highlight their structure.

Factor 1 which accounts for 25.24 percent of the data matrix variance, suggests that a basic dimension of the Avaruan community is a traditional life style factor. The positive factor loadings on this factor (see Table 5.1) describe a dimension consisting of Cook Island Maoris engaging in subsistence agriculture earning less than \$600 a year and living in temporary or substandard dwellings. The traditional orientation of the group as defined by this factor is further indicated by the fact that cooking is done by traditional means, houses are generally without inside piped water and utilise pit latrines. Most households are growing subsistence food crops and have a high persons per dwelling figure. Migrants from the other Southern Islands in the Group are also an important element in this dimension, as are males, generally indicating some selective settlement of unattached migrant males. At the opposite extreme the negative factor loadings indicate that very few Europeans coexist in the same areas with Cook Islanders. Most of these Europeans are New Zealanders, living in large modern rented dwellings well-equipped with domestic and sanitary equipment and employed in high salary jobs in the administrative or technical sector of the economy.

Figure V.1 which illustrates the distribution of this factor, shows that the traditional life style factor is much more significant in the Upper Takuvaine and Avatiu areas, whereas the European group shows a very strong orientation to Nikao and to a lesser extent to Atupa.

The second factor accounts for 14.66 percent of the total variance and indicates the existence of what can only be defined as a male urban economic dimension. The village areas with high scores on this factor (Table 5.2) are characterised by males engaging in the

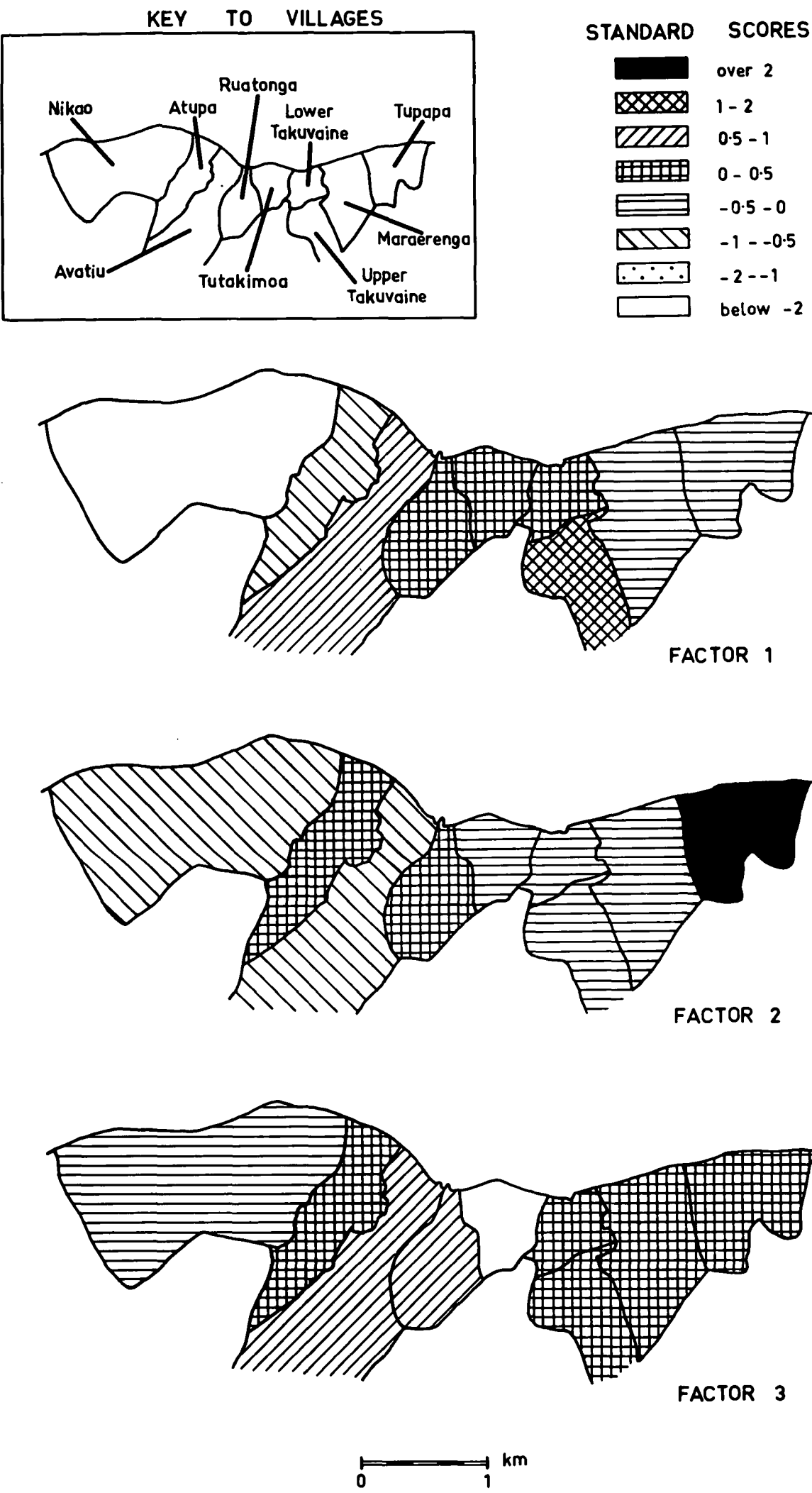


Fig. V.1 Factor Scores 1-3, Avarua.

TABLE 5.2FACTOR 2URBAN ECONOMIC FACTOR

<u>Variable</u>	<u>Loading</u>
Percentage Males in Services	0.9385
Percentage Males in Commerce	0.9176
Percentages Males Unskilled Labourers	0.8604
Percentage Males earning less \$600 p.a.	0.7379
Percentage Males Clerical/Sales workers	0.7297
Percentage Cook Islander	0.5019
Percentage houses with electricity	0.4842
Percentage Household heads born Rarotonga	0.4494
Percentage population aged over 60	0.4175
Percentage houses owned	-0.4777
Percentage Employed Males Agriculture/Fishing	-0.5041
Percentage other Population	-0.5774
Percentage Males earning more \$2,000 p.a.	-0.6856
Percentage born outside Cook Islands or N.Z.	-0.6981
Percentage Employed Males in Administration	-0.7029
Percentage Females Employed	-0.8745

service and commercial sectors of the town's economy. The majority of these males are in unskilled labouring or clerical positions earning less than \$600 per annum.

The negative factor loadings indicate that few females, few males working in the Administration and few non-European foreign-born coexist with the urban economic characteristics. The distribution of factor 2 (Figure V.1) shows the significance of Tupapa-Pué in the west of the town with a lesser concentration in Ruatonga and Atupa.

Factor 3 which accounts for 14.37 percent of the data matrix variance was interpreted as an ethnic Rarotongan-Southern migrant factor. The positive loadings on this dimension (Table 5.3) show it to be dominated by Rarotongan and Southern-born migrants many of whom are engaged in subsistence or commercial agriculture. Many males are employed as planters or gardeners or as agricultural labourers. These groups are in many cases living in the traditional kikau house form. The negative factor loadings indicate that these characteristics do not apply to Northern migrants many of whom are living in makeshift temporary dwellings. Equally segregated are Europeans in professional, administrative and technical occupations. The relatively high negative loading on illegitimate births suggests a close relationship between this and Northern migrants.

The distribution of factor 3 shows a belt of Rarotongan-Southern migrant influence to the east of the town centre in Avatiu-Ruatonga while most areas west of the centre show a lesser orientation to this factor. Tutakimoa and Nikao, on the other hand, stand out as ethnic enclaves of a different kind, the former a highly distinctive area of Northern settlement with some Europeans while the latter having a large proportion of Europeans intermixed with Southern groups.

Factor 4 accounts for 13.59 percent of the total variance and when inverted clearly represents a demographic factor in which the importance of children is put against that of young adults in the population. Positive factor loadings indicate that this group contains large numbers of young children, high fertility patterns including a high

TABLE 5.3FACTOR 3RAROTONGA-SOUTHERN MIGRANT ETHNIC FACTOR

<u>Variable</u>	<u>Loading</u>
Total percentage born on Rarotonga	0.9119
Total percentage born on Southern Islands	0.8563
Percentage household heads born on Southern Islands	0.7319
Percentage households growing subsistence crops	0.7034
Percentage employed males agriculture/gardening	0.6906
Percentage household heads born on Rarotonga	0.6575
Percentage Kikau houses	0.5704
Percentage employed males in agriculture/fishing	0.5317
Percentage households growing cash crops	0.4585
Percentage European	-0.3772
Percentage substandard dwelling	-0.3818
Percentage illegitimate births	-0.4087
Percentage employed males professional/tech./admin.	-0.4283
Percentage temporary dwellings	-0.6041
Percentage household heads born Northern Atolls	-0.9128
Total percentage born Northern Atolls	-0.9573

illegitimacy component and a strong orientation to the traditional kikau dwelling structure (see Table 5.4). Negative loadings show that young adults employed mainly in manufacturing and as clerical and sales workers tend to be residentially segregated from the youthful age groups.

The distribution of this factor shows among other things the youthful structure of Nikao and to a slightly lesser extent the areas of Avatiu and Upper Takuvaine. Tupapa, Atupa and to a lesser extent Ruatonga and Maraerenga were all areas in which young males were of more significance in the population (see Figure V.2).

Factor 5 which accounts for 13.38 percent of the data variance is more difficult to interpret. Positive loadings on this factor seem to indicate the existence of an established residential element in the town engaging in commercial agriculture. Other positive loadings on this factor are percentage of population aged over 60 years, mean number of beds, percentage of households utilising the traditional umu, mean number of rooms and percentage "other" population (Table 5.5). Certain negative concentrations stand out, identifying areas of the town having many houses built since 1961, a larger proportion of young adults and large numbers of rented houses. These areas house many of the recent arrivals to the town.

Factor 6 accounts for only 7.65 percent of the variance and when inverted can be interpreted as a high socio-economic dimension. The positive loadings (Table 5.6) suggest a Rarotongan middle-aged professional/administrative group earning in many cases more than \$2,000 per annum. Negative loadings are slightly more difficult to understand but suggest that males engaged in part-time casual work as well as subsistence food gardening or other agricultural activities do not tend to co-exist with the Rarotongan socio-economic elite. The distribution of this factor shows the village areas of Ruatonga and Lower Takuvaine to be distinctive in terms of this factor and to a lesser extent the areas of Nikao, Tupapa and Tutakimoa. On the other hand, Maraerenga, Upper Takuvaine and Atupa have negative factor scores.

TABLE 5.4FACTOR 4DEMOGRAPHIC FACTOR (INVERTED)

<u>Variable</u>	<u>Loading</u>
Birthrate 1966	0.8965
Percentage population 0-14	0.8670
Dependency ratio	0.7958
Percentage Illegitimate births	0.7004
Percentage Kikau houses	0.6855
Total population	0.6712
Percentage other population	0.4908
Percentage population over 60	-0.4559
Percentage houses with flush toilet	-0.4621
Percentage houses with no water	-0.4902
Percentage employed Males Clerical/Sales workers	-0.5017
Percentage employed males in manufacturing	-0.7841
Percentage population 15-24	-0.9363

Fig. V.2 Factor Scores 4-7, Avarua.

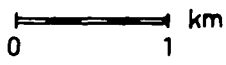
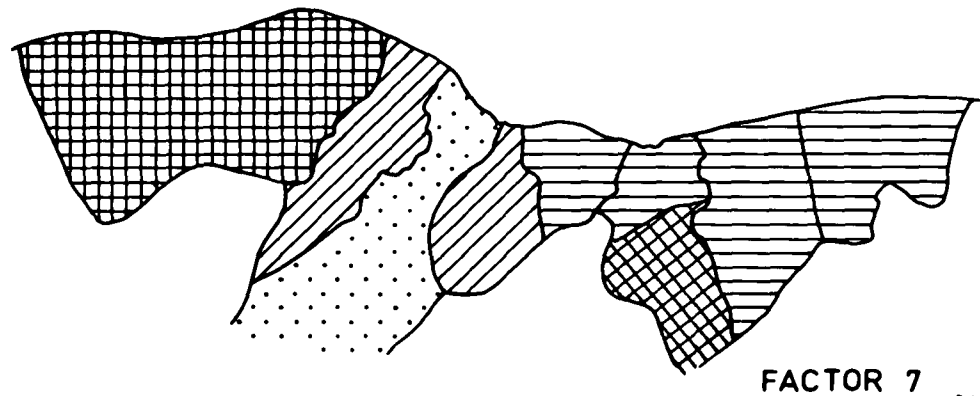
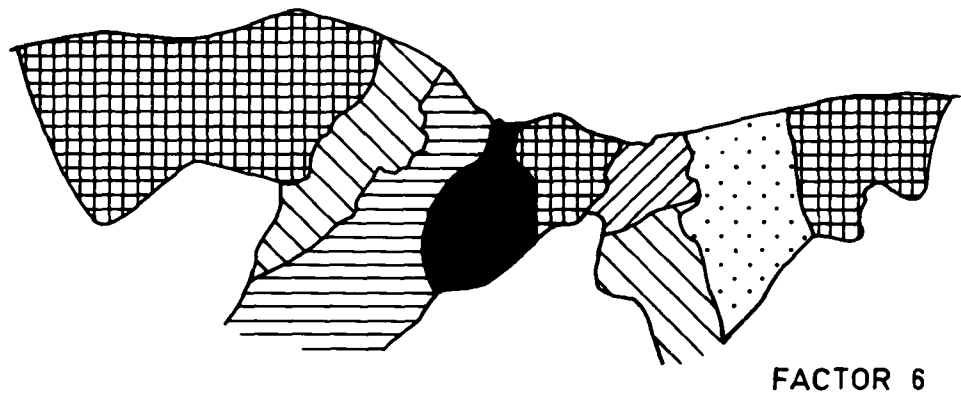
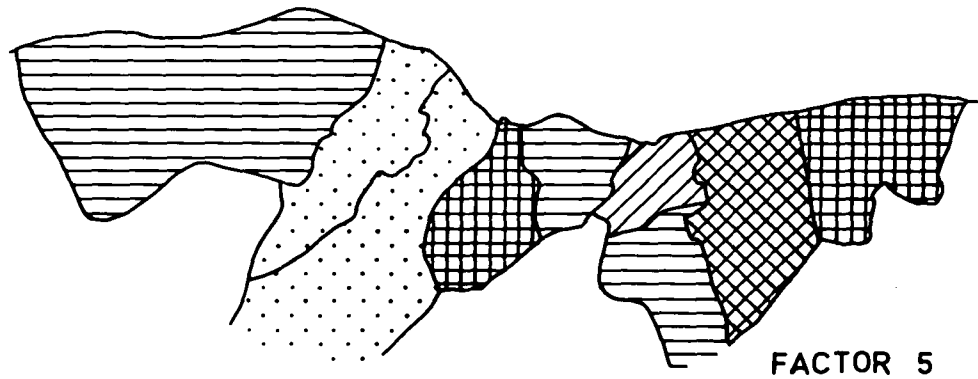
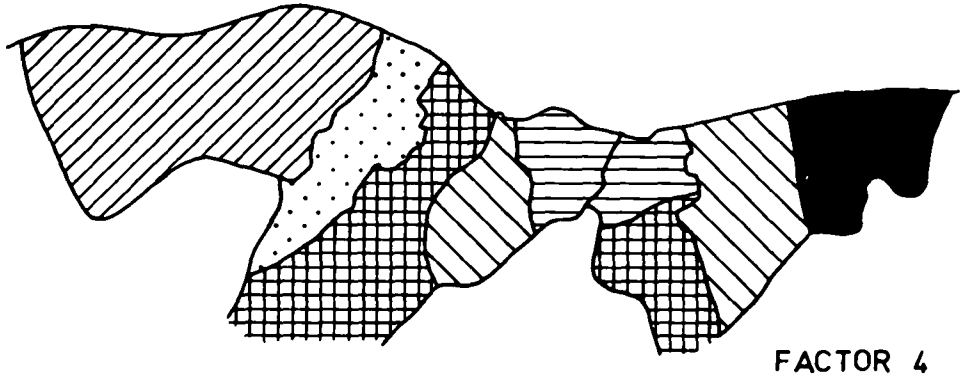


TABLE 5.5FACTOR 5ESTABLISHED RESIDENTIAL FACTOR

<u>Variable</u>	<u>Loading</u>
Percentage Dwellings constructed pre-1945	0.9617
Percentage households growing cash crops	0.7816
Percentage population aged over 60	0.5555
Mean number of beds	0.5467
Percentage households using umu	0.5176
Percentage other population	0.5077
Mean number of rooms	0.5032
Percentage houses with pit latrine	0.4912
Percentage household heads born Southern Islands	0.4429
Persons per dwelling	0.4386
Mean size dwelling	0.4217
Percentage households growing subsistence crops	-0.4539
Percentage households with flush toilet	-0.4713
Percentage dwellings substandard	-0.4902
Percentage houses without water	-0.5317
Percentage houses rented	-0.5473
Percentage population 25-44	-0.8259
Percentage dwellings constructed post-1962	-0.8868

TABLE 5.6FACTOR 6HIGH SOCIO-ECONOMIC FACTOR (INVERTED)

<u>Variable</u>	<u>Loading</u>
Percentage population 45-60	0.8745
Percentage employed males wages/salary full-time	0.5369
Percentage employed males professional/tech./admin.	0.5139
Percentage males earning more \$2,000 p.a.	0.4584
Percentage household heads born on Rarotonga	0.4427
Percentage employed in Administrative jobs	0.4109
Percentage employed males subsistence activities	-0.3645
Dependency Ratio	-0.3886
Percentage employed males on casual work	-0.5489
Percentage employed males agriculture/gardening	-0.6050
Percentage households with no water	-0.6327

TABLE 5.7FACTOR 7SUBSISTENCE AGRICULTURE FACTOR

<u>Variable</u>	<u>Loading</u>
Percentage employed males subsistence activities	0.7391
Percentage population 25-44	0.3834
Percentage household heads born Southern Islands	0.3537
Percentage males	0.3289
Percentage substandard dwellings	-0.3804
Percentage males on wages/salary full-time	-0.5419
Marriage rate	-0.8616
Fertility ratio	-0.9006

Finally, factor 7 accounts for 7.05 percent of the data variance and can be interpreted as describing a subsistence agriculture factor. Males engaged in subsistence activities load significantly on this dimension as do the middle-adult age groups and southern migrants (Table 5.7). This factor infers that many Southern migrants have intermarried with local groups and thus gained access to land. The distribution of this group (Figure V.2) indicates a concentration in Upper Takuvaine with two areas of slightly lesser significance in the east of the town.

It has been shown that the seven factors in toto account for 95.94 percent of the variance in the complete data matrix. An additional and more complete test of the adequacy of the factorial approach in this case may be obtained by computing the communality of each variable. This is simply the proportion of a variable's total variation that is explained by the seven components or factors. The coefficient (communality) shown in Table 5.8, multiplied by 100, gives the percent of variation of a variable in common with each pattern. In this case only two of the 60 variables could perhaps be considered inadequately 'explained'. These are variables 48 (mean number beds) and 59 (percent dwellings owned) which have respectively .613 and .536 of their variances accounted for. The majority of the variables have in excess of .90 of their variation explained indicating the adequacy of the factor solution.

Comment

The factor analysis of the characteristics of Avarua in 1966 underlines the complexity of the modernisation-urbanisation process in the Cook Islands. To a large extent Avarua still appears to be ecologically dimensioned according to the traditional principles of ethnicity, traditional way of life characteristics and youthful demographic factors linked by exogamy to extended family networks. As well, and consistent with the concept of a town 'in transition' from traditional to modern, a number of urban economic and socio-economic

TABLE 5.8

PROPORTION OF VARIATION IN EACH VARIABLE
ACCOUNTED FOR BY SEVEN FACTORS

<u>Variable</u>	<u>h^2</u>	<u>Variable</u>	<u>h^2</u>	<u>Variable</u>	<u>h^2</u>
1	.883	21	.966	41	.979
2	.987	22	.966	42	.993
3	.999	23	.999	43	.994
4	.989	24	.969	44	.877
5	.997	25	.953	45	.969
6	.999	26	.983	46	.988
7	.992	27	.978	47	.995
8	.926	28	.894	48	.613
9	.982	29	.972	49	.999
10	.986	30	.862	50	.979
11	.998	31	.989	51	.934
12	.808	32	.999	52	.997
13	.959	33	.999	53	.999
14	.998	34	.983	54	.983
15	.998	35	.909	55	.988
16	.999	36	.999	56	.996
17	.997	37	.993	57	.999
18	.986	38	.986	58	.943
19	.999	39	.999	59	.536
20	.922	40	.999	60	.945

h^2 = Communality, sum of squared factor loadings.

factors have made their appearance. The emergence of economic and socio-economic factors seems to suggest that the traditional arrangements most closely associated with the economic-technological order buckle first under the impact of modernisation and social change. This has led to a reshaping of traditional economic forms to accord with the needs of the emerging industrial-urban system. In this case, employment in administrative and personal services, unskilled labouring and clerical trading store activities have been grafted onto a base of subsistence agriculture. Ethnicity remains a dominant differentiating factor of town life. The investigation revealed that the ethnic differential was significant in terms of household size, fertility and illegitimacy patterns and housing type and quality. Within Avarua many Northern and Southern migrants seek the hospitality and company of fellow villagers. To this extent ethnic considerations override the element of residential choice based on status and prestige considerations. The ethnic factor has also been responsible for the development of enclaves of depressed housing. The processes involved in the creation of these areas have not been ones of orderly choice but rather of kinship attraction and the illegal occupation of unused or unoccupied land. Overseas experience suggests that with the passage of time these 'squatter settlements' may progress to a more respectable residential and legal status within the town (see Mangin 1967) and the development of an occupation rights tenure for house sites suggests that much the same may happen in Avarua. Particular ethnic groups are also differentially placed with regard to 'modern' urban activities. Southern-born groups, particularly Rarotongans with greater access to land are much more concerned with agricultural activities, particularly commercial agriculture than are Northern migrants. On the other hand there would appear to be a stabilised residential element in the town engaged in the more highly paid professional/administrative and technical sector. Factor loadings indicate this element to be middle-aged Rarotongans for the most part working for the Cook Island's Administration. The majority of the European-born population also stands apart from the rest of the town's

population. These Europeans generally occupy the social apex of Rarotongan society and maintain a uniformly high standard of living and are demarcated from the local population by physical and social distance.

The factor analysis also reveals a number of other interesting points: firstly the considerable re-adjustment going on in the Avaruan socio-economic structure due to immigration and emigration. Selective emigration has removed many young adults from the population and this has meant that in many cases the middle-aged and elderly sector of the town's population bear the brunt of subsistence activities and in some cases are also responsible for other economic activities within the town. The sixty years and over age group loads on Factor 2 (urban economic dimension) and Factor 5 (established residential dimension) while the middle-aged group (45 to 60 years) loads on Factor 6 (socio-economic dimension). In the second case it would appear that the town's population is at too early a stage in the demographic transition for fertility differentials by socio-economic class to have emerged. Thirdly, although sharp ethnic differences in the population are to some extent blurred by intermarriage, ethnicity is nevertheless, an important differentiating feature of the town's population. The distinction between Europeans, Northern migrants and Southern-born groups is of considerable significance in the town's ecological structure. Finally the loading of adults aged 45 to 60 on Factor 6 (socio-economic factor) and elderly adults on Factor 5 (established residential factor) indicates that the stabilised element within the town's population is largely comprised of the older age groups.

Residential Differentiation and Societal Scale

A major development in the study of the axes of urban residential differentiation was the Shevky-Bell formulation of 'social area analysis' (Shevky and Bell, 1955). This approach was largely based on a conceptual view of societal scale relating the type and complexity of urban differentiation to the 'scale' and level of development of the

society involved. One of the basic criticisms levelled at Shevky and Bell's argument is that although they asserted at the close relationship between societal scale and the emergence of independent axes of residential differentiation, nowhere do they provide a satisfactory discussion of the connection. It is a basic tenet of human ecology that ecological structure can be seen as a reflection of social organisation. Thus it is possible to see residential differentiation as being part of a wider process of social change and social differentiation. Changes in the nature of social organisation and social patterns may be expected to generate changes in the bases of residential differentiation. The basic social area model advanced by Shevky and Bell depicts three major dimensions of residential differentiation said to be typical of large scale urban-industrial society. These were (1) social rank, (2) familism and (3) ethnicity, each factor being independent of the others, and together representing a valid model of the residential structuring of the modern industrial city. Inherent in the Shevky-Bell formulation was the belief that urban communities in simpler non-Western societies would be marked by a much lesser degree of urban differentiation. Timms in a recent paper (Timms, 1970) has suggested that a fruitful approach to investigating the relationship between societal scale and the emergence of residential differentiation is via the concept of 'modernisation'. Quoting Rogers and Svenning, Timms believes modernisation to be the "process by which individuals change from a traditional way of life to a more complex, technologically advanced and rapidly changing style of life" (Rogers and Svenning, 1969: 14). It is argued that the increasing modernisation of a society may produce the emergence of an increasing number of axes of urban differentiation. In the pre-modern city one could therefore expect little social and economic differentiation but rather a coalescence of social and economic roles, that is, a heavy loading of most social and economic variables onto a single differentiating factor.

Recently Timms has gone further and suggested that there is a continuum of urban differentiation and complexity related to societal scale and the degree of non-indigenous involvement in the society (Timms,

1971: 143-148). Thus at one end of the continuum lies the Feudal or Traditional city distinguished by a single axis of social and residential differentiation onto which demographic, socio-economic and ethnic variables all load. Between this situation and the multidimensional modern western city lie a number of variants ranging from a Pre-industrial type, Colonial type to an Industrialising city and Immigrant city. Timms implies that increasing scale itself a product of modernisation produces increasing disassociation between family and socio-economic variables until the various factors disassociate and become independent. Unfortunately, studies of non-western colonial and pre-industrial towns and cities are exceedingly few (see for example Abu-Lughod, 1969; McElrath, 1968; Mabogunje, 1968). Those studies that have been undertaken seem to support Timms conclusions. Abu-Lughod in her study of the factorial ecology of Cairo found no factorial separation between social rank and family status indicants in the city. She observed that

".... the disassociation between social rank and familism variables found in contemporary Western cities in societies at the terminal stages of the demographic transition can be attributed to the reinforcing and cumulative effects of several conditions that "define" the nature of urban organisation in such cities: (1) residential segregation according to modern ranking systems, (2) relatively low correlations between social rank and differences in fertility and family styles, (3) high differentiation of residential sub areas by housing type, (4) mobility; and (5) predominance of independent households. To the extent that these conditions are not perfectly fulfilled, the vectors will not be totally disassociated" (Abu-Lughod, 1969: 209).

If the disassociation between social rank and familism variables provides an index of the degree of modernisation in a particular society then Avarua stands some way along the traditional-modern continuum. To this extent Avarua combines elements of the Colonial and Transitional order with aspects of the traditional society. Like the Colonial city, there is a close association between the ethnic factor and local power structure as indicated by a close intercorrelation between indicants of residential status and socio-economic status. Like the transitional or developing city, social rank (in this case measured by the traditional, economic and socio-economic factors), family status and ethnic status all emerge as separate dimensions but show some

intercorrelation.

The main problem in comparing these results with previous work is that most factorial ecological studies so far undertaken have been concerned with large cities or urban areas and the small and 'traditional' status of Avarua makes comparison difficult.. The small and village nature of Avarua has meant that functional differentiation of land-use has been very slow to emerge. Most village areas within the town are characterised by a mixture of land-uses, ethnic and social groups. Consequently, ecological patterns are not very clear and it is difficult to make broad generalisations with any confidence. In addition, the socio-economic variables employed in the study were not explicitly selected to test the relevance of the Shevky-Bell constructs of social rank, family status and ethnicity. Nevertheless the factor structure of Avarua appears to provide considerable support for the modernisation - differentiation thesis. Unlike Timms' earlier study of the factorial ecology of the Cook Islands (Timms, 1970), where no factorial separation was obtained between social rank and familism variables at the inter-Island level, the present study revealed the existence of a number of independent social, economic and demographic factors.

PART III

MIGRATION TO NEW ZEALAND

MIGRATION TO NEW ZEALAND

BACKGROUND TO MIGRATION

Historically, New Zealand has always had a highly selective immigration policy which has shown preference for migrants from the United Kingdom or to the other Anglo-Saxon countries of the Commonwealth. Except under particular conditions migrants have not been actively encouraged from other areas. There are, however, a number of special categories which have come in for individual treatment. After the Cook Islands were annexed to New Zealand in 1901 Cook Islanders as British subjects and New Zealand citizens could leave the Group freely provided that they first had the permission of the Resident Commissioner. After 1939 it became common administrative practice, however, for intending emigrants to first obtain an exit permit including a taxation clearance, a medical examination and a chest X-ray. The Cook Island authorities have at times also required of emigrants details of their reasons for travelling, the arrangements made for meeting them, the extent to which advances made for the fare will be refunded, the arrangements made if the emigrant desires to leave behind a wife or family and even details of possible employment in New Zealand. Once in New Zealand, Islanders were extended full citizenship rights and after a short period of residence the full facilities of the Welfare State were open to them. As well as allowing the free admission of Cook Islanders, New Zealand's special interests in the Southwest Pacific were reflected in a liberal policy of admission for other Polynesian groups, notably West Samoans, Niueans and Tokelau Islanders.

Cook Islanders, therefore, have had relatively easy access to New Zealand since the turn of the century. Until the early 1940s however, relatively few had taken advantage of the opportunity to migrate and prior to this date there was only a very small Island community resident in Auckland. Prior to 1940, emigration from Rarotonga was kept at a low level by virtue of the extremely limited

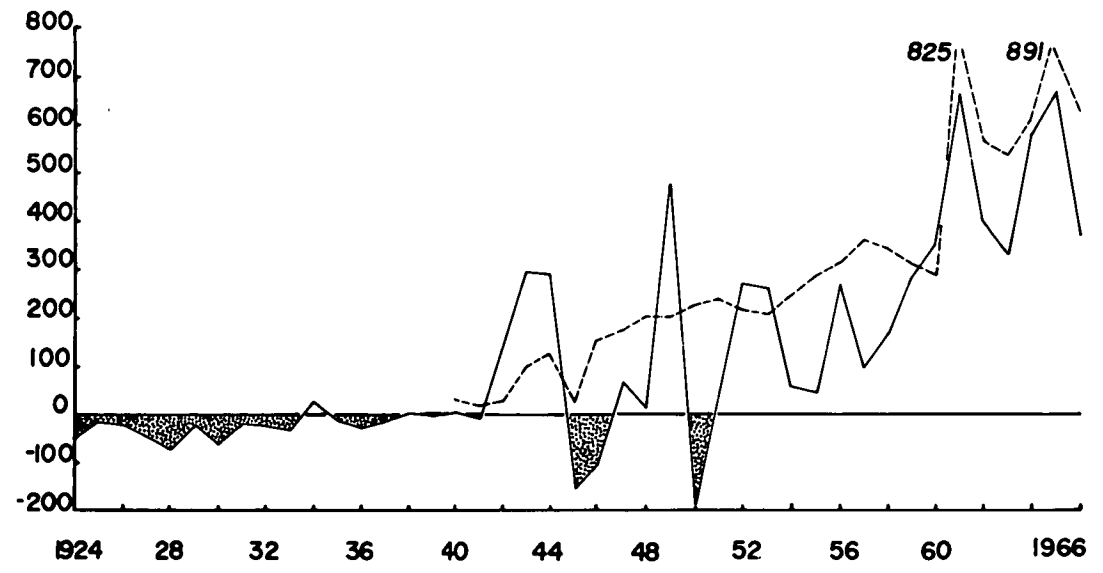
transport facilities available. After 1914 transport links were mainly restricted to the monthly visits of the Union Steamship Company vessels on their way to the west coast of the United States. Not until 1936 could the Island boast of a regular direct service to New Zealand when the M.V. Matua commenced a monthly run. This service was shortlived, however, and until the Maui Pomare was diverted from the New Zealand - Fiji - Samoa route in 1939, shipping contacts with New Zealand were very irregular. Despite the restrictions of the transport system, Cook Islanders had been making their way to New Zealand at least from the late 1880s as crew on ships. In addition, two world wars had seen the necessity of raising troops in the Islands and training them in New Zealand.

Cook Islanders began migrating to New Zealand in considerable numbers after 1942. From less than 100 departures a year in the early 1940s, emigration grew to between 200 and 300 per year in the mid 1950s and finally reached 600 - 800 in the 1960s. A small number of women had been recruited for domestic and factory work in New Zealand during the war and immediate post-war year. By the end of World War II the numbers moving to New Zealand expanded in response to improved transport facilities. In the latter years of the War the Royal New Zealand Air Force inaugurated a fortnightly air service to Aitutaki and Rarotonga which in 1945 was taken over by the National Airways Corporation (NAC). Sunderland flying boats flew the first leg from Auckland to Fiji whereupon travel was by Douglas DC3 via Tonga, Western Samoa, Tuituila and Aitutaki to Rarotonga. In total the journey took three days to complete. On the 31st of October, 1952 this service was superseded by Tasman Empire Airways Ltd's (TEAL) fortnightly "coral route" flying-boat service via Aitutaki to Tahiti. At the same time the Maui Pomare continued to make regular monthly calls from New Zealand. The volume of emigrants grew accordingly. Most leaving the Islands came directly from Rarotonga or Aitutaki, even if indirectly from other Islands. The importance of labour recruitment to Makatea in the 1942-55 period seems

to be a vital dislodging factor in the movement of Islanders to New Zealand. Many of the indentured labourers sought more than one term on Makatea and in this way often accumulated enough money to pay their fare and that of their family to New Zealand. It is very likely that a high proportion of the arrivals in New Zealand in the period between 1945 and 1958 earned their fares in this manner.

The year 1961 saw a rapid expansion in the numbers leaving for New Zealand, promoted in part by improved transport facilities and the buoyancy of New Zealand economic conditions and in part by the stimulation of the resident Cook Island community in New Zealand. Up until September of 1960 the volume of migrants had been restricted to between 200-300 per annum by the limited number of berths available. Apart from the fortnightly flying-boat connection from Aitutaki, the only regular service was the 33 year old Maui Pomare. In 1961, however, the Maui Pomare was replaced by the M.V. Moana Roa, a new vessel with a capacity of 2,750 tons and accommodation for 40 passengers, and both the Matson and Shaw Saville liners began making regular calls to the Island. Almost overnight the number of berths available increased tremendously and in the first month of the new service an estimated 109 Islanders left for New Zealand (On File, Customs Dept. Rarotonga). In the same year TEAL replaced its fleet of flying-boats and withdrew from the Island run. For the next three years the Islands were without any air service apart from the regular calls of military and Civil Aviation aircraft. Then in mid 1963, Polynesian Airlines Ltd (PAL) extended its South Pacific service to include regular calls to Aitutaki and Rarotonga. Flying Douglas DC3 aircraft from Western Samoa, PAL made regular twice-a-week flights to Aitutaki and twice weekly flights to Rarotonga during the summer period*. At the same time, the RNZAF continued its connections with the Islands both through land planes and flying-boats (See Appendix B). Polynesian Airlines service to the Cook

* At other times of the year PAL had a once a week connection to Rarotonga.



(Broken line represents Departures to N.Z.)

Fig. VI.1 Excess Departures Over Arrivals, Rarotonga 1924-1966.

Islands ceased operation in June, 1966 when an international regulation restricting the operating range of two-engined propeller driven aircraft came into force. After this date, the RNZAF continued to make regular calls to Rarotonga in Hercules aircraft and for all ostensible purposes assumed the role of a domestic carrier of passengers. The increased transport activity between 1961 and 1966 had as its upshot a considerable increase in numbers emigrating to New Zealand. In these five years there was a net loss of 3,000 Islanders from Rarotonga and Aitutaki, the great majority of whom went to New Zealand (See Figure VI.I). In the 26 years after 1940 there had been more than 16,000 departures from the Islands with a net emigration loss of more than 5,300 (Table 6.1).

Lack of economic opportunities, an increasing demand for manufactured consumer durables, the spread of education resulting in higher education and social aspirations, general population growth, the increase of information about New Zealand as well as the stimuli of a resident Cook Island community in New Zealand have all been factors encouraging emigration. But emigration is much more than this. After 120 years of population movement within the Group and to other parts of the Pacific, migration has been built into the social structure. Young men and women are today expected to migrate to Rarotonga and/or New Zealand. Migration is now almost a part of the life cycle, almost a rite de passage. Emigrants have usually been drawn from the working population in the 20s and 30s. More often than not they constitute the most skilled and enterprising sector of the population. Emigration has also been largely unplanned. The results have of course been, as mentioned above, a marked alteration in the demographic structure of the population sometimes reaching a scale which threatens the economic viability of the community. Migration tends to result from the knowledge that opportunities have increased or are perceived to be better in New Zealand rather than from declining per capita incomes or living standards in the home village. Felt wants rather than immediate

TABLE 6.1
EMIGRATION FROM COOK ISLANDS 1940-1966

	<u>To New Zealand</u>			<u>To All Areas</u>	
	Males	Females	Total	Total	Nett Loss
1940-1949	533	473	1,006	4,830	1,058
1950-1960	1,926	1,059	2,985	6,454	1,290
1961-1966	2,296	1,774	4,070	5,133	3,000
Total	4,755	3,306	8,061	16,417	5,348

Source: Calculated from Files of Justice, Premiers and Customs Departments, Rarōtonga

everyday necessity stimulates migration and as education grows and more information flows back from prior emigrants, so the contrast in opportunities between New Zealand and the home village becomes more accentuated.

Origins of Migrants

By far the largest number of migrants have come from the three Southern Islands of Rarotonga, Aitutaki and Mangaia. Rarotonga has contributed rather more than half this number and the remainder have been drawn from the smaller Southern Islands as well as from the more isolated Northern Atolls (Table 6.2). Most of the migrants to New Zealand have come directly from Rarotonga or Aitutaki even if they had been born on one of the other Islands. Table 6.3 details the point of embarkation of non-Rarotongan born emigrants to New Zealand in 1965 and their duration of residence at that point. Of the 552 included in this Table, 133 or 24.1 percent (34.8 percent if those departing from Aitutaki are excluded), had been resident on Rarotonga for more than three years, while a further 118 (21.4 percent) had been living on the Island for between one and three years (30.7 percent excluding Aitutaki departures). By contrast, 54 or just over 10 percent were merely 'in transit', spending the minimum time it required to see kinsfolk and finalising departure details before making the trip to New Zealand (See Table 6.3). Many of the Islanders who had spent less than one year on Rarotonga had moved to that Island in response to an invitation from kin to join them in New Zealand. Inter-island transport being what it was, it was often necessary to move some months in advance so as to be ready on the spot when the time for embarkation to New Zealand arrived. The fact that almost half of the immigrants to New Zealand had lived on Rarotonga for some little time is not without its social significance. Most during their stay would have experienced urban conditions in Avarua.

TABLE 6.2
BIRTHPLACE OF COOK ISLANDERS LEAVING THE
COOK ISLANDS FOR NEW ZEALAND 1965

	<u>No.</u>	<u>Percent</u>
Rarotonga	339	38.05
Aitutaki	193	21.66
Mangaia	106	11.89
Atiu	53	5.95
Mauke	45	5.05
Mitiaro	11	1.23
Palmerston	14	1.57
Pukapuka	30	3.37
Manihiki	28	3.14
Rakahanga	12	1.35
Penhryn	43	4.83
New Zealand	10	1.12
Other	7	0.78
Total	891	

Source: Customs Department, Rarotonga 1965

One of the principal features of Cook Island migration to New Zealand would seem to be the continued existence of a wide area of origin. In 1965, 41 of the 42 villages in the group contributed migrants to the migrational stream*.

Whatever may remain of a traditional indigenous culture in the Islands, (and there is evidence that apart from Rarotonga and perhaps Aitutaki, the remainder of the Islands have been only very slightly affected by modernisation and rapid social change), the vast majority of men, women and children who have migrated to New Zealand have been brought up within a British culture, taught from a New Zealand orientated school syllabus in English speaking schools by school teachers with some experience of New Zealand middle class values. They have been taught from New Zealand textbooks about New Zealand and British history and learned to sing "God Save the Queen" and of the exploits of the "All Blacks" as well as being partly indoctrinated by the New Zealand mass media. Their indigenous culture has thus been overlain by a veneer of colonial values and by the religion of Christian missionaries. Just what impact all this has had on the personality structure of the indigenous Cook Islander remains to be investigated, yet it would appear that such a background does in some small part prepare the way for the adoption of New Zealand urban values.

In 1965 just over half of all emigrants to New Zealand went via Western Samoa and Nadi on Polynesian Airlines and Air-New Zealand at an average cost per adult of approximately \$195 (from Rarotonga). A little over one-third departed on one of the Moana Roa's 10 trips for that year (at an average cost per adult of \$90) while an additional eight percent went by Matson at an average cost per adult of \$215. For the remainder, some went to New Zealand via Shaw Saville to Tahiti, others as crew on visiting yachts or other

* Details of village and Island origin of 1965 emigrants are given in Appendix B.

TABLE 6.3

RESIDENCE OF 1965 NON-RAROTONGAN EMIGRANTS TO NEW ZEALAND

	Birthplace													
	Aitutaki	Mangaia	Atiu	Mauke	Mitiaro	Palmerston	Pukapuka	Manihiki	Rakahanga	Penrhyn	Manuae	N.Z.	Total	
Resident in Rarotonga >3 years	15	31	20	16	8	7	8	6	4	18	-	-	133	
Resident in Rarotonga 1-3 years	9	25	18	19	3	5	12	13	3	12	-	-	119	
Resident in Rarotonga 6m-1 year	2	29	8	6	-	3	6	5	4	9	1	5	78	
Resident in Rarotonga <6 months	21	13	3	1	-	1	1	4	1	4	1	4	54	
Departed from Aitutaki	146	8	1	4	-	2	2	-	-	-	-	-	158	
Not stated	-	-	3	2	-	-	1	-	1	2	-	1	10	
Total	193	106	53	45	11	14	30	28	12	43	2	10	552*	

* includes 5 others

Source: Customs Department, Rarotonga 1965

vessels, while a handful left on one of the few RNZAF flights (Table 6.4).

DEMOGRAPHIC STRUCTURE OF MIGRANTS

In common with migrants to other countries, the flow of Islanders to New Zealand has always consisted of young adults normally of working age. Migration was characterised from the start by a high proportion of young women, by a fairly low incidence of permanent return migration and by its responsiveness to the labour market in New Zealand, in particular the acute shortages of unskilled labour in the mid and late 1950s. The result was that the Islanders who arrived after 1945 were absorbed without great difficulty into the New Zealand labour force. There are indications that the composition of the Cook Island migration to New Zealand has changed through time. The main trends since the late 1940s have been the rising proportion of married adults and the increasing frequency of family migration.

Demographically, migration to New Zealand falls into four well-defined phases:

1. The ebb and flow of lone working age males prior to 1942.
2. The period between 1942 and 1950 when young females formed a significant proportion of all migrants.
3. The period 1950 to 1958 when young males again dominated the migrational flow in many cases leaving wives and families behind in the Islands.
4. The period between 1958 and 1966 marked by delayed family migration.

Prior to 1942 the great majority of migrants were lone working age males who drifted to New Zealand as crew on ships or via the limited transport available. With most of these the intention was to see what New Zealand was like, to earn money and ultimately return to the Islands. Until the 1940s the Cook Island community in New Zealand was concentrated almost exclusively in

TABLE 6.4
MEANS OF TRANSPORT 1965 EMIGRANTS

	Cook Islanders		Europeans		Total Cook Islanders
	From Rarotonga	From Aitutaki	From Rarotonga	From Aitutaki	
Moana Roa	306	3	94	0	309
Air (P.A.L.)	254	242	316	30	496
Matson	69	0	64	0	69
Other	17	0	8	0	17
Total	646	245	482	30	891

Source: Customs Records, Rarotonga 1965

Auckland and remained in essence a small pioneer society dominated by these 'birds of passage'. In 1936 the Cook Island sex ratio in New Zealand revealed 151 males per 100 females and if only full-blood Islanders are considered the ratio was almost 180 (N.Z. Census, 1936, 1945). An influx of young working age females during and after World War II altered this high masculinity ratio and reversed the normal trend in migrants of recent origin where there is usually a low proportion of females at the outset and thereafter a gradual movement towards parity of the sexes. Between 1940 and 1950 out of a total 1,006 arrivals in New Zealand, 473, or 47 percent were young women (Customs Department Rarotonga). The reasons for such an influx may be sought in the demand for Cook Island women as domestics and factory workers in New Zealand during these years and the apparent willingness of prospective employers in New Zealand to pay fares. The number of young women moving to New Zealand after 1940 actually outnumbered the flow of males in six of the nine years up to 1950 (See Table 6.5). After 1950, however, the normal trend asserted itself and the number of male emigrants regularly outstripped the number of females. The upsurge in male migration after 1950 would appear closely related to the large number of Cook Island males being employed as labourers on the Makatea phosphate diggings. Despite the fact that there was an increase in the number of young males moving to New Zealand in the 1950s, it would appear that relatively few settled permanently prior to the mid 1950s. For many the intention remained to earn money and return. These 'trail blazers' did, however, pave the way for the large-scale movement that was to follow in the next decade. The demographic structure of emigrants in the early 1950s was in many ways typical of a migratory working population (See Figure VI.2X).

There was a heavy dominance of young unmarried adults, particularly in the 20-34 year age group and a relative deficit of young children and elderly adults. Between 1948 and 1955 only 11 percent of all departures to New Zealand were aged under 15 years, while 56 percent

TABLE 6.5

DEPARTURES TO NEW ZEALAND AND FEMALE DEPARTURES 1940-1966

	Departures to N.Z. as % of total departures	Female Adults as % of total departures	Children as % of total departures*	Total Females as % of emigrants to N.Z.
1940	53.3	64.4	6.6	79.16
1941	32.2	38.7	41.6	60.0
1942	17.16	21.64	5.22	73.91
1943	28.79	24.85	2.73	54.73
1944	19.17	7.51	8.79	27.5
1945	9.17	9.17	9.17	52.38
1946	26.51	11.21	9.43	34.22
1947	21.74	15.73	6.39	48.82
1948	26.08	17.3	5.64	55.77
1949	14.69	9.64	2.18	46.15
1950	36.71	14.62	3.82	18.55
1951	59.28	26.81	9.79	40.43
1952	26.02	15.12	6.07	32.85
1953	27.32	25.0	9.97	48.5
1954	29.07	20.44	8.76	51.88
1955	43.16	21.43	11.55	35.56
1956	52.8	22.07	9.34	31.51
1957	95.95	38.91	23.78	30.7
1958	93.65	35.64	30.39	28.9
1959	61.26	38.93	19.76	42.9
1960	44.83	33.07	25.55	33.56
1961	95.05	29.84	27.42	43.51
1962	81.95	33.04	25.47	41.91
1963	83.59	40.0	26.09	42.8
1964	64.88	29.34	23.13	48.67
1965	80.71	29.16	23.37	41.63
1966	72.22	40.33	24.11	43.69

*Children under 15 years of age

Source: Calculated from files Premiers, Customs and Justice Departments, Rarotonga.

were between 20 and 34 years of age. Where the structure deviates from the expected norm, however, is in respect to the large numbers of young unmarried females especially in the 20-34 age bracket.

By 1960 an important demographic change had occurred in the structure of those departing the Islands. During the earlier periods of migration the pattern was very much an individualistic movement of young adults temporarily divorced from family considerations. Many were sojourners who desired to spend only a short time in New Zealand and then return home. Some migrants to be true were married, but those that were, usually left their family behind in Rarotonga or on their home Island. After 1960 there was a remarkable expansion in the numbers of women and young children emigrating to New Zealand as families moved to join relatives and kinsfolk already in New Zealand. After 1959, children aged under 15 years regularly accounted for one-quarter of all departures whereas for the period 1945-56 they had averaged only 12 percent of departures. At the same time the numbers of females migrating grew very rapidly (Table 6.5 and Figure VI.3).

By 1965 the demographic structure of departures to New Zealand had radically altered from that of ten years before. Children under 15 years of age now accounted for more than 27 percent of all departures whereas in the 1940-56 period they had only accounted for approximately 9 percent (See Figure VI 2a). Growth in the numbers of young children under nine years emigrating was even more spectacular. In the early 1950s this group accounted for only seven percent of all departures whereas by 1965 this figure had increased more than threefold to 22.3 percent.

The Demographic Structure of Migrants in 1965

In 1965, 891 Cook Islanders left Rarotonga and Aitutaki with New Zealand as their destination. Of these, all but 94 intended to stay in New Zealand if not permanently then at least for some little time. Figure VI.2 records the age-sex structure

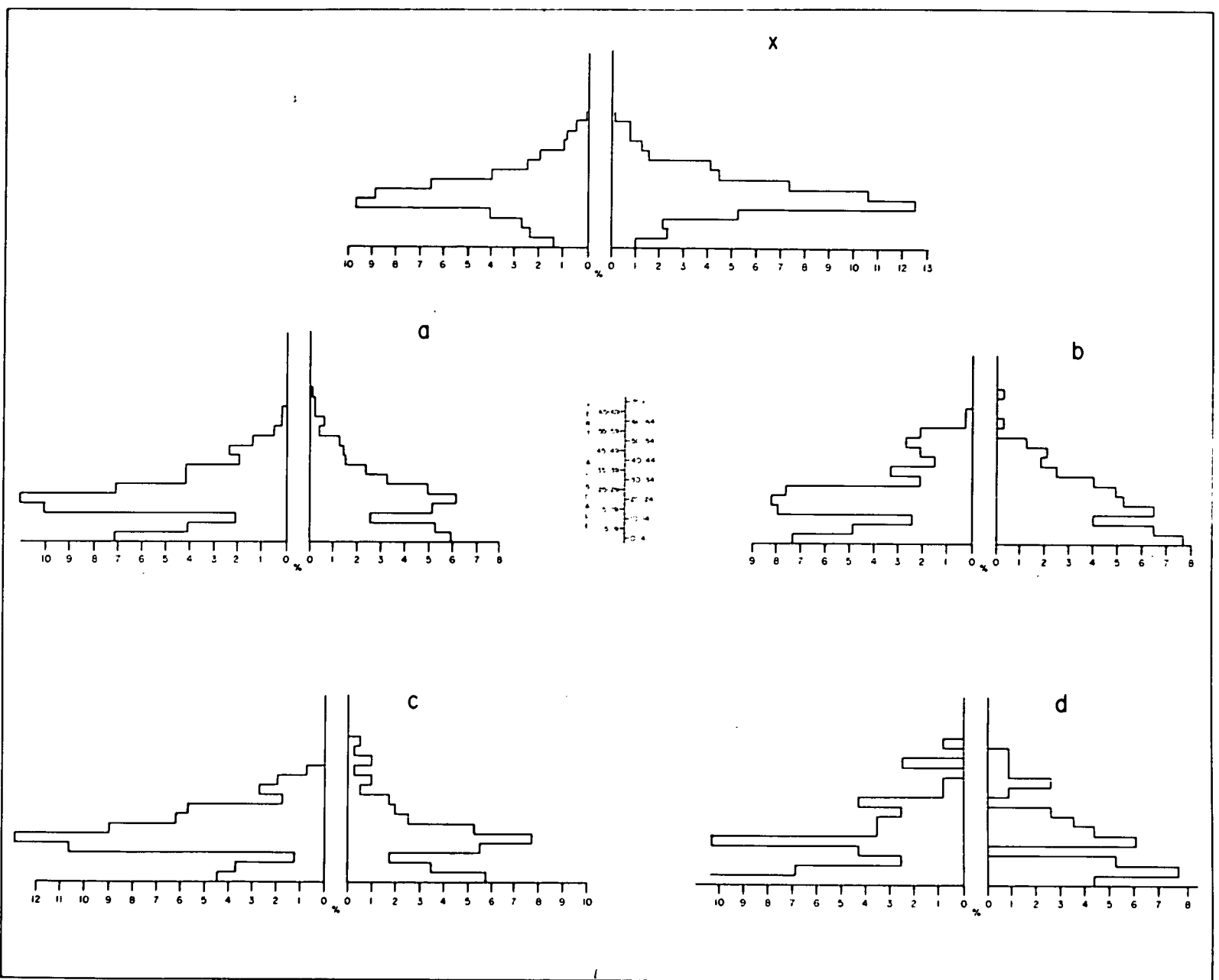


Fig. VI.2 Age-Sex Structure Emigrants.

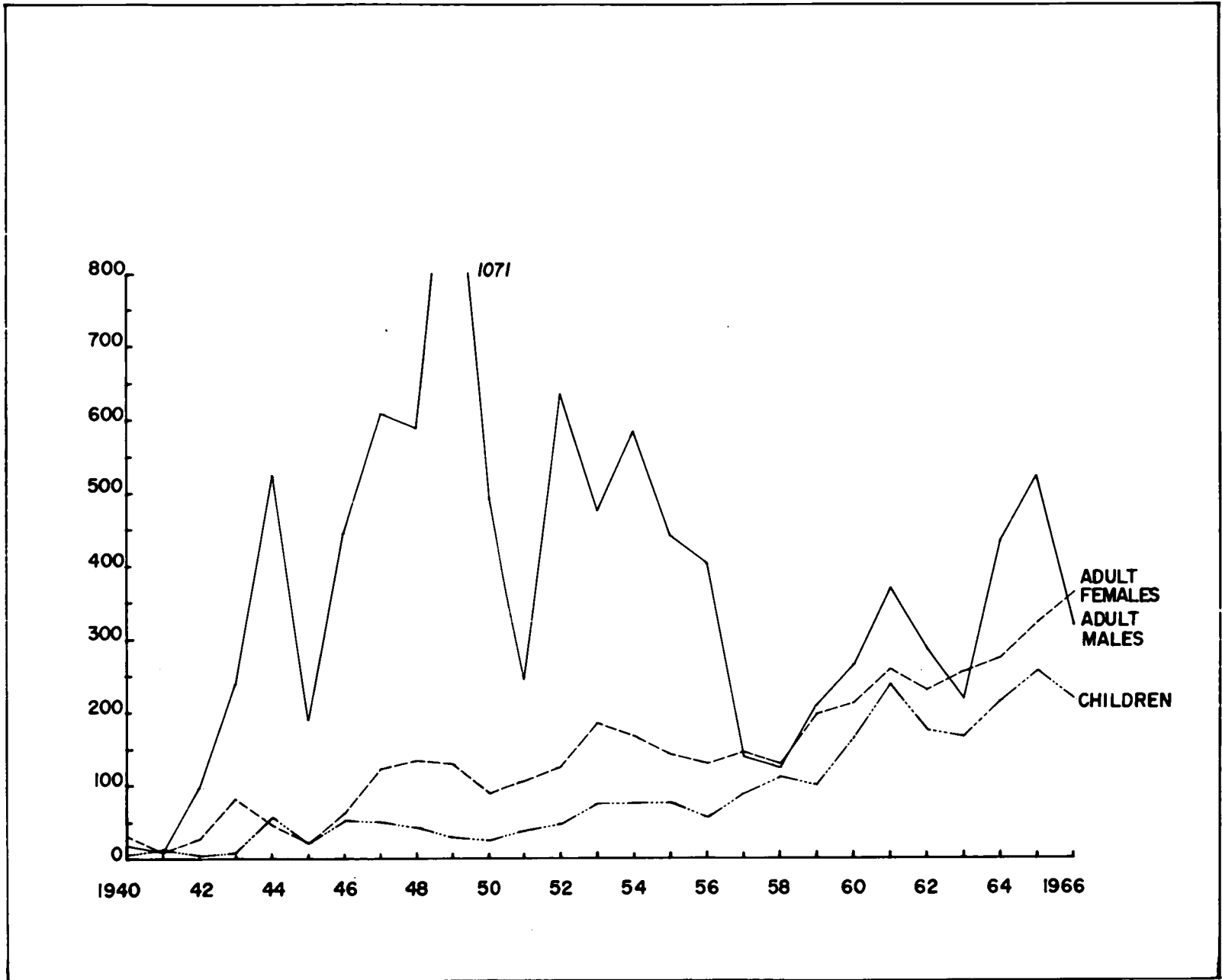
x Arrivals in NZ 1948-55
a Total 1965 departures to NZ
b Rarotongans to NZ 1965
c Southern-migrants to NZ 1965
d Northern-migrants to NZ 1965

of migrants intending permanent settlement in New Zealand. Some interesting points emerge. In the first place, the migration of Rarotongan-born persons was a much more balanced movement between the sexes with a sex ratio of 111.4 (See Figure VI.2b). Secondly, although the young adult age groups were still extremely important, migration also involved the movement of young family groups including large numbers of children under the age of 15 years. By contrast, migration from the other two Island groups was essentially a movement of young working-age adults (Figure VI 2c and 2d). This is particularly evident for migrants born on the Southern Islands (excluding Rarotonga) where in 1965 one-third of all migrants were aged between 15 and 29 years and the overall sex-ratio was heavily weighted in favour of males (156.5). By comparison with Rarotongan-born migrants, young children barely accounted for one-fifth of migrant numbers.

Who Migrates?

It is difficult to place the above narrative in perspective without first making some reference to the particular groups involved in the migration process. Table 6.6. allows a closer examination of the groups contributing to the migration stream in 1965. These figures show the very high proportion of married males and family groups migrating to New Zealand. In this year, 100 married males departed for New Zealand leaving a wife and family behind in the Cook Islands. As Table 6.6. shows, 41 of these migrants originated from Aitutaki, while the remainder had lived on Rarotonga for some time. Many of these men had signed a written undertaking to regularly remit funds for the upkeep and maintenance of their dependents until they returned or had their family join them in New Zealand. Undoubtedly, the intention was to send back the fare so that their family could join them as quickly as possible. That this is the case is borne out by the large number of family groups (women and children) who left the Islands in 1965 to join a

Fig. VI.3 Male and Female Emigration, Rarotonga 1940-1966.



husband already in New Zealand. In almost every case the husband had remitted the fare from New Zealand. In addition to these two groups, which in 1965 accounted for almost 42 percent of all emigrants, 20 complete family groups (involving 73 persons) emigrated. Grandparents, feeding parents, widowed fathers and other elderly folk looking after children whose parents were already in New Zealand, together with young children journeying by themselves to join their parents, made up an additional 71 persons. All in all therefore, family groups either complete or fragmented, accounted for 60 percent of all migrants in 1965. In addition to these migrants, 266 unmarried adults over the age of 16 years made the trip to New Zealand. Short-term absentees moving to New Zealand en route for other countries and persons moving to New Zealand for additional schooling or training accounted for 94 persons in 1965. Fifteen females were recruited for domestic service in New Zealand, the majority for work in the rural areas of the North Island, while three unmarried males were recruited from Aitutaki for agricultural work in the Manawatu.

Migration Chains and Movement to New Zealand

Since Cook Islanders first began drifting to New Zealand a considerable change has taken place in the form and nature of the migration process. Initially begun as a temporary individualistic movement of the young, the unmarried, the more energetic and the enterprising sector of the population, it had by 1960 assumed much more of a permanent movement of family groups. In a little over 20 years, therefore, migration had changed from a simple pioneer movement to something resembling a mass social movement. In other words, migration had become something of an established style, an example of collective behaviour. So long as there were people to migrate the principal cause of their migration was the knowledge that others like themselves had gone before and that they were moving to a place which contained a substantial nucleus of fellow kinsfolk. This

TABLE 6.6

COOK ISLAND DEPARTURES TO NEW ZEALAND 1965

	<u>Male</u>	<u>Female</u>
<u>Married Males leaving wife and family behind:</u>		
(a) from Aitutaki	41	2
(b) from Rarotonga	59	0
<u>Family Groups to join husband already in N.Z.:</u>		
(a) from Aitutaki	15	34
(b) from Rarotonga	56	128
<u>Females recruited as domestic labour:</u>		
(a) from Aitutaki	0	8
(b) from Rarotonga	0	7
<u>Single males recruited for labour:</u>		
(a) from Aitutaki	3	0
<u>Other:</u>		
Teenagers on Scholarships	18	10
Grandparents plus feeding children to join parents in N.Z.	5	17
Elderly parents joining children in N.Z.	21	13
Complete Family Groups	34	39
Children to join parents	8	9
Father and Children to N.Z.	19	13
Short and long term trainees to N.Z. and overseas	18	13
Administrative officers	6	2
Boy Scout Troop	27	0
Single Males	190	0
Single Females	0	76
Total Departures	520	371

Source: Files Customs, Premiers and Police Dept., Rarotonga,
plus fieldwork

situation was probably reached in Auckland by the late 1950s.

With many Cook Islanders, a process of chain migration has become the significant factor in their movement to and settlement in New Zealand. The general process of chain migration has been defined

".... as that movement in which prospective migrants learn of opportunities, are provided with transportation and have initial accommodation and employment arranged by means of primary social relationships with previous migrants" (MacDonald and MacDonald, 1964: 82).

Chain migration is thus distinct from the individually organised migration that typified the early movement of Cook Islanders. A migration chain becomes established when a receptive individual successfully establishes himself in New Zealand. Thereafter, he may become, directly or indirectly, the prime reason for, or the main instrument of, the migration of others. In direct cases he may sponsor the migration of a close relative by remitting money to cover all or part of the fare or perhaps arrange employment in a city factory. In all cases will he provide accommodation and general assistance on arrival. Some of the Cook Island migrant chains established prior to the 1940s are still moving today, albeit at a somewhat slower rate. More importantly, it is those chains established during the 1945-1955 period which are most active, systematically siphoning off large numbers from the Islands. Many of the early migrants to New Zealand were primarily concerned with economic gain rather than permanent settlement and it is not until after World War II that the Cook Island community begins to establish on a more permanent basis. In some cases it took a few years before migrants felt in a secure enough position to begin sponsoring the emigration of relatives. Beckett quotes the example of the first Pukapukan migrant to settle in New Zealand. This man, a veteran of the 1914-18 War had been trained in New Zealand during the early period of hostilities. After the war he did not return to the Cook Islands but married a New Zealand Maori and settled down permanently in Auckland. It was not until 1948, however, that

he sponsored the emigration of a relative and thereafter the normal pattern of chain migration established itself, most of his relatives settling in two districts of Auckland. Only three returned home to the Islands, but nearly all regularly remitted money to relatives in the Islands (Beckett, 1970:429). There is also some evidence to suggest that married Cook Island women who had their fare paid to New Zealand by an employer in that country later remitted money for the fare of their spouse and children reversing what is taken to be the normal process. The best example of chain migration, however, is the delayed family migration that dominates the migration scene after 1960.

A surprisingly high proportion of migrants in New Zealand had their fare from the Islands prepaid by friends or relatives already in New Zealand. Of a survey of recent arrivals in Auckland* just over one-quarter had their fare paid in this manner while in an additional 23 cases a husband preceded his wife only to later remit her fare so that she and any children might join him (See Tables 6.7 and 6.8). As well as these people, a small number met the necessary financial outlay on fares with help from relatives in Rarotonga, the Outer Islands or Tahiti. In 10 cases an employer in New Zealand provided the fare for a prospective employee who on arrival would be contracted for a set period. Of the remainder, the majority saved the bulk of the fare themselves often with contributions from a wide variety of sources. To illustrate this further it is useful to quote the example of Tere T. Tere T. born on Aitutaki in 1929, subsequently moved to Rarotonga 20 years later where he married a Rarotongian and decided to settle on his wife's land. The same year the couple gave birth to a son. Children followed at regular intervals until by the end of 1957 Tere had a young family of three boys and three girls. In 1953 Tere enlisted for work in Makatea and subsequently served two nine month contract

* See Appendix A for a discussion of this survey.

TABLE 6.7FINANCE FOR TRIP TO NEW ZEALAND

	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>Percent</u>
Relative in N.Z. Provided	16	10	26	18.7
Friend in N.Z. Provided	7	2	9	6.47
Relative in Islands Provided	5	4	9	6.47
Relative in Tahiti etc. Provided	2	2	4	2.88
Employer in N.Z. Provided	4	6	10	7.19
Husband in N.Z. Provided	0	23	23	16.55
Saved Self	30	11	41	29.49
Other	2	3	5	3.59
Not Stated	7	5	12	8.63
Total	73	66	139	99.97

Source: Auckland Survey of Migrants

TABLE 6.8MAIN SOURCE OF FINANCE FOR CATEGORY "SAVED SELF"

	<u>Male</u>	<u>Female</u>	<u>Total</u>
Makatea Earnings	14	0	14
Planting Earnings	10	0	10
Administrative Sales Salary	5	2	7
Machinist Salary	0	5	5
Other	1	4	5
Total	30	11	41

Source: Auckland Survey of Migrants

periods on the Island. Prior to this he had secured a living by assisting his father-in-law and brothers in plantation work. Tere's own brother had gone to New Zealand in 1949 and after a short period of rural work in the central North Island had settled in Auckland. By the early 1950s his letters and odd gifts of food and clothing had encouraged Tere to decide to join him. It was, however, not until late 1956 that Tere had accumulated sufficient funds to be able to do so. When he left for New Zealand in November 1956 Tere took with him his wife and three of their youngest children. The three eldest they left with their parents in Rarotonga. The total cost of the trip came to approximately £258.12.6d. The majority of this amount being met by Tere himself from savings accrued from his work on Makatea. In addition to this, however, relatives both in the Islands and New Zealand advanced sums (which Tere undertook to repay). The remainder came from his wife's earnings as a machinist in Scott and Watson's clothing factory and money earned by Tere from the sale of plantation crops and as a labourer for the Union Steamship Company (See Table 6.9). Tere sent back the fare for their eldest child in 1959 and also contributed towards the visit of his wife's parents in 1962.

Table 6.10 examines the distribution of marital status by age among the Auckland community surveyed. One of the most striking features to emerge is the comparatively high proportion of both sexes who are unmarried under the age of 30 and the virtual absence of marriages under 20. That marriage is not avoided completely but only postponed is demonstrated by the fact that less than one percent over the age of 40 have never married. From this it can be inferred that migration has in fact delayed marriage. The sample revealed the average age at which Islanders moved to New Zealand to be 23.76 years for males (S.D. 10.963) and 22.56 years for females (S.D. 12.726). Approximately 41 percent of informants in the sample reported that they married after arrival in

TABLE 6.9
SOURCE OF FUNDS FOR FARE TO NEW ZEALAND OF
TERE T. RAROTONGA

<u>Source</u>	<u>Amount</u>
Makatea Earnings 1952-54	£146. 7. 6
Citrus Planting	9.10. 0
Wharf Labour (USSCo Ltd)	16. 4.11
Wife's earnings (clothing machinist)	15.10. 5
Aunt in Rarotonga contributed	5. 0. 0
Father in Aitutaki Advanced	14. 7. 6
Brother in New Zealand Advanced	40. 0. 0
Cousin in New Zealand Lent	10. 0. 0
Other	<u>4. 0. 0</u>
Total	<u>£261. 0. 4d</u>

Source: Field interview December 1965.

New Zealand. Of the remainder the majority were married in the Cook Islands and moved to New Zealand in a chain fashion, the wife and family following behind the bread-winner by as much as four years. The mean time for a family to re-form in New Zealand was, however, only 10.62 months (S.D. 3.9253).

THE DYNAMICS OF MIGRATION

It is popularly believed that the prime reason for the migration of Cook Islanders (and other Polynesian groups) to New Zealand has been the poverty, lack of employment opportunities and over-population of the sending society. It is also believed that once such a migration is underway its continuance is assured until the sending society is roughly at the same level of development and material welfare as the receiving society. At the same time, much is made of the lure of the attractions of the city with its much greater range of opportunities, physical and social benefits. To a certain extent this holds true here, and in very general terms it is evident that migration has its 'push' and 'pull' factors. The main 'push' factors consist of economic underdevelopment resulting in unemployment and a high degree of casual or part-time labour, extremely low wage levels, lack of opportunity and incentives and the absence of adequate facilities for educational, professional and technical training. Also important has been the desire to experience something new and different, to escape the social dullness and often onerous restrictions of the traditional communal system and home village area. Since the late 1940s the major 'pull' factor has undoubtedly been the buoyancy of the New Zealand labour market with continued full employment. Islanders have been attracted to New Zealand by the prospect of year round jobs, considerably higher wages, the benefits and facilities of the Welfare State as well as by a simple desire to "see what it was really like". Such reasons as this, are to a certain extent satisfactory at the aggregate level but do not really tell us very much about

TABLE 6.10
MARITAL STATUS BY AGE, AUCKLAND SAMPLE
 (%s)

	Never Married		Married		No Longer Married		Total Numbers	
	Male	Female	Male	Female	Male	Female	Male	Female
15-19	20.31	15.08	0	2.38	0	0	26	22
20-24	6.25	7.94	3.12	3.15	0	0	12	14
25-29	3.12	4.76	5.46	7.93	0	0.78	11	17
30-34	3.12	1.59	6.25	12.7	0	0.78	12	19
35-39	0	0.79	17.2	14.25	1.56	0.78	24	20
40-44	0.78	0	12.5	10.3	3.12	0	21	13
45-49	0	0	6.25	5.55	0	0	8	7
50-54	0	0	3.12	3.15	0	1.58	4	6
55-59	0	0	2.34	1.58	0.78	0.78	4	3
60+	0	0	2.34	2.38	2.34	1.58	6	5

N = males 128
 females 126

Source: Auckland Survey

individual motivations. It would seem very likely that by the end of the 1950s social and economic conditions in the Cook Islands acted more as a permissive rather than as a dynamic factor in migration. In other words, adverse conditions in the Cook Islands provided an environment sympathetic to migration but did not necessarily cause it. This leads one to the conclusion that trends in emigration to New Zealand are governed by factors external to the Cook Islands situation. Peach in his study of West Indian migration to Britain found the external factor most influencing the emigration of population from the West Indies was the demand for labour in the United Kingdom. Using as an index of labour demand the number of outstanding vacancies in each quarter he found a correlation between rises in labour demand and rises in the rate of migration (See Peach, 1968: 36-38). While available data on Cook Island migration to New Zealand nowhere approximates the detail available to Peach, it was possible to investigate a correlation between the number of migrants to New Zealand between 1946 and 1965 with the number of job vacancies in that country as measured by monthly averages over calendar years. Such a test recorded a moderate correlation of $-.62$ indicating that when job vacancies were at their highest the level of immigrants was at its lowest and vice versa. At the same time a correlation run was attempted between the number of emigrants for the same years against per capita income from agriculture in the Cook Islands. This realised a weak correlation of $-.178$ indicating that declining income levels in the home society were not a very significant factor in stimulating migration. Undoubtedly the answer must be sought elsewhere. To this end it is useful to divide migrants into two broad categories depending on their motivations. Firstly a category of active migrants, those who would seek out suitable destinations which in their eyes had the most to offer in terms of physical and social welfare. Secondly, a category of passive migrants, those who move in response to stimuli set up by relatives and friends already in New Zealand. By the 1960s the level of passive migrants was very

high. In 1965, of the 797 permanent migrants to New Zealand, 38.4 percent were immediately distinguishable as passive migrants moving in response to a decision of some other person, either parent, husband or close relative in New Zealand. On closer examination of the remaining migrants it is possible to further distinguish individual motivations. With this end in view it is instructive to compare the results of the Auckland survey with a survey of intending migrants on Rarotonga*. For the latter, 129 Islanders were randomly selected from amongst the 561 who applied for an exit permit to leave Rarotonga at the end of 1965. The responses of this sample were then distinguished from those of the sample of recent arrivals interviewed in Auckland. Immediately noticeable from the Rarotongan survey was the large number who indicated that they were moving in response to stimuli set up by relatives and friends already in New Zealand. Only 17 percent indicated that their movement to New Zealand was in the hope of obtaining a better job and a higher wage while general curiosity about New Zealand conditions attracted a further 14 percent. Dissatisfaction with conditions in the Islands by contrast, only affected a handful of migrants (See Table 6.11). When these results are compared with those recorded in the Auckland survey (Table 6.12) an interesting point emerges. Almost one third of all males in the Auckland survey gave as their primary reason for migration the desire to obtain more money and/or a better job. This figure is almost double the proportion indicating the same reason in the Island's survey and seems to suggest that after arrival in Auckland and exposure to the labour market and high wage levels these conditions tend to overshadow other factors. Of the adults in the Auckland survey, 52 or 37 percent were passive migrants while 101 of the 119 additional persons in these households (excluding children born in New Zealand) accompanied

* See Appendix A for a discussion of these surveys.

TABLE 6.11PRIME REASON FOR MIGRATION TO NEW ZEALANDPOTENTIAL MOVERS RAROTONGA

(%)

	Male	Female	Total	Total% minus passive migrants
To be near friend/relatives	33.3	25.9	30.2	39
Hope of better job and more money	16.0	9.25	13.2	17
Dissatisfaction with local conditions	9.33	0	5.42	7
For education of children	2.67	1.85	2.32	3
For Holiday	8.0	9.25	7.75	11
General curiosity	14.65	5.56	10.8	14
Health reasons	1.33	0	0.775	1
Other	1.33	0	0.775	1
Not stated	5.33	5.56	5.42	7
Accompanied parents/relatives	8.00	42.6	22.48	-
Number in Sample	75	54	129	100

Source: Survey of Potential Movers, Rarotonga

TABLE 6.12PRIME REASON FOR MIGRATION TO NEW ZEALAND AUCKLAND ADULTS

(%)

	Male	Female	Total
General curiosity	10.96	3.03	7.19
Better job and more money	31.51	6.06	19.42
Dissatisfaction with Island conditions	6.06	0	2.88
Education of children	3.03	0	1.44
Holiday	6.85	4.55	5.76
Job arranged by N.Z. employer	4.11	13.64	8.63
Health reasons	4.11	1.51	2.88
To be near friends/relatives	6.85	4.55	5.76
Education/Training	1.37	3.03	2.16
In response to fare sent by husband	0	40.91	19.42
In response to fare sent by other relative	12.33	12.12	12.23
Crew on ship	1.37	0	0.72
Other	1.37	0	0.72
Not stated	10.95	10.61	10.79
Number in Sample	73	66	139

Source: Auckland sample

their parents to New Zealand or came to join friends and/or relatives. Again the Auckland survey indicated that dissatisfaction with Island conditions did not loom very large as a dynamic factor in migration. Both surveys, therefore, pinpoint the very large number of migrants who moved to New Zealand at the behest of relatives or friends in the Islands or New Zealand. In 1965 probably as many as 60-65 percent of all permanent departures fell within this class.

Few studies have concerned themselves with the universe of potential migrants or for that matter with the migrant's perception of urban conditions gleaned from the flow of information back to the Island. Table 6.13 details the prime source of information about New Zealand of 100 potential migrants in Rarotonga at the time of their emigration. Letters, New Zealand newspapers and periodicals often accompanying food parcels and other gifts sent back by relatives in New Zealand were the main source of the migrant's information about New Zealand conditions. A small number depended upon local news items (including the infrequent display of cuttings from Auckland newspapers on a notice board outside the Administration offices in Avarua), Cook Island radio reports (including the New Zealand news and Pacific Islands programme) as well as library books and the few films about New Zealand that were infrequently shown in the local cinemas. The large number who possessed little or no information about New Zealand conditions suggests that the decision to move is often taken with very little information at hand. In the 1965 Rarotongan migrant survey, 16 percent had no knowledge of New Zealand conditions and many of those deriving their information from local sources had at best a very imperfect understanding of the place they intended to move to. Nearly all were dependent on the highly subjective reports of relatives and casual conversations with people who had been to New Zealand or from one of the other sources available on the Island. Most of the sample did, however, have one or more relative living in New Zealand (Table 6.14).

Once an individual reaches a point where he feels he has

TABLE 6.13
PRIME SOURCE OF INFORMATION ABOUT NEW ZEALAND
POTENTIAL MOVERS, RAROTONGA*
 (%s)

	Male	Female	Total
Letters/Periodicals etc. from relatives	40.58	25.81	36.0
Local news items/C.I. News/library	18.84	16.13	18.0
Books/films/school			
Previous visit to New Zealand	4.35	3.23	4.0
Job information sent by relative/friend	13.04	6.45	11.0
Contact with people who had visited N.Z.	7.25	19.35	11.0
Other	1.45	6.45	3.0
No knowledge of New Zealand conditions	14.49	19.35	16.0
Not stated	0	3.23	1.0
Total in Survey	69	31	100

* Extracts 29 females and children whose informational source was their husband or parents.

Source: Rarotongan Survey of Potential Movers.

TABLE 6.14
NUMBER OF RELATIVES LIVING IN NEW ZEALAND
POTENTIAL MOVERS RAROTONGA*¹
 (%s)

	Male	Female	Total
One or more than one	59.97	60.87	59.13
None	30.43	21.74	26.96
Not stated	11.59	17.39	13.91
Total in Survey	69	46	115

*¹ Excludes 14 children (6 male, 8 female).

Source: See Table 6.13.

accumulated sufficient information about New Zealand and depending upon personal circumstances and background, he may be ready to make a decision as to move or to stay. This raises the question as to what constitutes the threshold of information necessary before a potential migrant is ready to move? Obviously, there are individuals who will respond more quickly than others to the various stimuli to migrate. Is there in fact a threshold of information below which the stimulus will not motivate the potential mover and beyond which its impact is lost? The question here is of course, what variables can be used to define the limits of this threshold, for example, age, sex, ethnicity, income, family status or number of kin in New Zealand? A migrant's migration elasticity (that is, the time it takes impulses and stimuli to be received before they are acted upon), is obviously related to such factors as his exposure to information, life cycle considerations, personal aspirations, administrative prerequisites and transport availability. Table 6.15 illustrates the varying degrees of migration elasticity of males from the above sample. For persons whose informational source about New Zealand came through letters and the like from relatives it required a mean monthly time lag of 20.11 months (S.D. 23.9643) after the initial overture had been received before they moved, whereas for persons with no real knowledge of New Zealand prior to their move it took a mean of 39.9 months (S.D. 30.0461) after they initially conceived of the idea before they put their move into practice. By contrast, those males recruited for a job in New Zealand moved fairly rapidly after the first contact with their potential employer. Other categories are given in Table 6.15.

The decision to migrate to a large extent proceeds from sets of stimuli and information perceived with varying degrees of imperfection. Information is sifted and sorted according to the individual's drives, needs and abilities. Hence data arrives through biased information channels and is subsequently distorted by each individual's perception and subjective filtering.

TABLE 6.15

MIGRATION ELASTICITY OF RAROTONGAN MALE MIGRANTS 1965

(%)

Period of Contact before making move

Informational Categories	less 6mths	6m-1yr	1-2yrs	2-4yrs	5yrs+	Total	Mean	S.D.
1. Letters etc.	10.71	17.85	32.14	28.57	10.71	28	20.11	23.96
2. Local news items	0	7.69	30.77	38.46	23.07	13	35.09	24.75
3. Job Inform- ation	22.22	33.33	44.44	0	0	9	8.11	4.95
4. Contact with previous migrants	0	0	40.0	40.0	20.0	5	35.0	27.71
5. No Knowledge	10.0	20.0	0	30.0	40.0	10	39.9	30.04

(n = 65)

Source: Rarotongan Field Survey 1965-66.

The Movement to New Zealand : A Perspective

It can be assumed that the members of a kinship group and the activities they perform constitute a single behavioural system. The environment of this system is seen to consist of characteristics of the households comprising the system, the location of the household units, the neighbourhood of these units and their relation to other nodes in the normal household movement cycles. This environment both influences the behaviour of the kinship group and is in turn influenced by its behaviour. The environment provides a continuous source of stimuli to which individuals and households respond. Thus, many of the inhabitants of the Cook Islands are at some stage in their life cycle faced with a fundamental decision whether to move to New Zealand or to stay in the Islands. The principal determinants of a decision to move rests on the interplay between a number of factors: the individual's attention to goals and aspirations, his stage in the life cycle, his exposure to stimuli from the environment, his satisfaction with his present residence and conditions, his previous migrational experience, family and kin considerations, group behavioural norms, various administrative requisites which may act upon him and the transport facilities open to him. In broad terms, migrational stimuli derive from a perceived disparity between the collective needs of a household and the characteristics of its environment. The decision to move would also seem to be strongly shaped by varying individual perceptions of New Zealand and New Zealand conditions. As well as such factors, various constraints may stand in the way of migration. Physical constraints are real and easily recognisable. Such factors as isolation, distance-cost factors and transport availability are all important. Other constraints, however, are perceived rather than physically apparent. Fear of being submerged in an alien, unfamiliar and possible hostile environment in New Zealand introduces a degree of anxiety into the migration decision for many migrants. Additional fears of losing one's land or being cut off from one's kinship group are other significant anxieties influencing the movement decision.

The Movement Decision

Having decided to seek a new residential location in New Zealand it would appear that the decision-maker or potential migrant negotiates for an environment of relative certainty to the extent that there is a broad tendency to postpone decisions. On the other hand, the degree of uncertainty is reduced by the imitation of the successful procedures of kinsfolk and friends who have moved before. Thus, as in retailing, there seems to be a tendency to 'follow the leader' and adhere to established migration paths. To this end, the resident of Rarotonga undoubtedly possesses additional advantages resulting from his greater exposure to information and outside contact. Perceptions of New Zealand as a desirable place to live vary according to personal experience and background as well as to the receipt of stimuli and information. The decision to move is thus not simply a semi-automatic response to objective economic and social circumstances.

Wolpert has introduced the concept of place utility and intendedly rational man who responds to the perception of unequal utility and for whom dissatisfaction acts as a stimulus to search behaviour when his tolerance level falls below his value of space utility* (Wolpert, 1965). The search behaviour of a potential migrant involves the utilization of, and reaction to, a variety of informational sources or channels. In the present context three elements appear critical: (1) The information available to the migrant, (2) The information already possessed by the migrant, and (3) The way in which the migrant utilizes the information he possesses. It has already been shown that a large number of migrants make a decision to move on the basis of very little information at hand while an equally large number have at best a very imperfect understanding of New Zealand conditions. Information availability is restricted largely to the operation of the kin and personal network although the local mass media does make

* Although this level may in fact decline as his search proceeds.

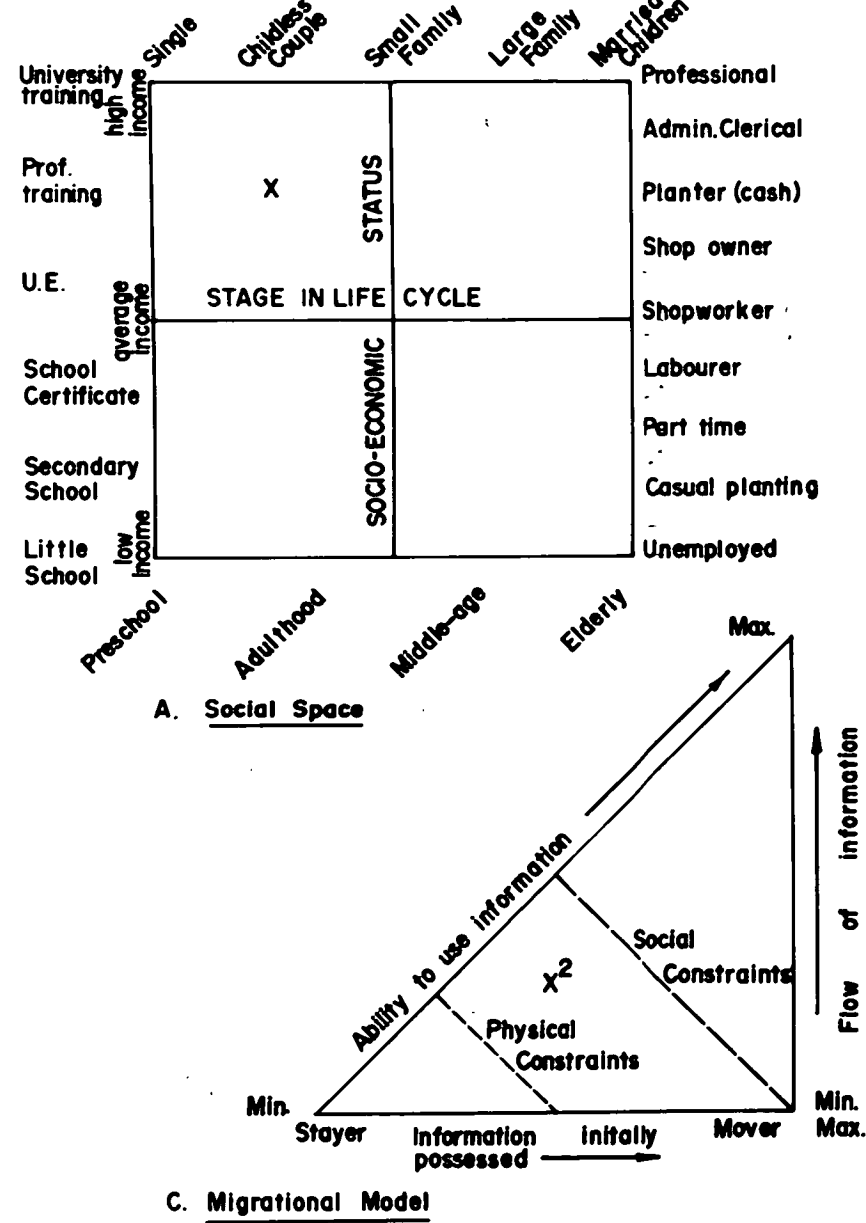
a small contribution. Much of this information is subsequently screened by the sources through which it is disseminated. Newspapers and Cook Island Radio provide at best, low quality information while the personal network also presents a distorted view of New Zealand conditions.

In very general terms the individual household occupies a position in social space defined by socio-economic and life cycle factors (See Berry and Horton, 1970:313). The household also occupies a position in migrational space whose axes comprise the number of kinsfolk in New Zealand, prior migrational history, degrees of dissatisfaction with local conditions and variations in the intensity and flow of information, remittances and assistance from New Zealand. Finally, we can visualise a simple model dimensioned by the flow of information, information initially possessed and the ability to utilize information gained. Within this model a series of physical and social constraints are incorporated to account for environmental and perceptual barriers to movement (See Figure VI.4).

A SYSTEMS APPROACH TO COOK ISLAND MIGRATION

In the growing literature on the study of migration a number of themes stand out as having attracted the greatest amount of attention, namely; the size and direction of the population movement; the reasons for migration; differential migration and the integration of newly arrived migrants into the urban environment. Concern with the distance factor has given rise to a considerable number of models of varying degrees of statistical and mathematical sophistication (See for example Stouffer, 1940, 1960), while the issue of why people move has usually been investigated within the framework of the "push-pull" hypothesis (See for example MacDonald, 1961; Mitchell, 1959). This has been elaborated from time to time to take account of internal movements such as rural-urban and rural-rural migrations as well as to international movements. The

Fig. VI.4 Model of Cook Island Emigration.



study of differential migration on the other hand has more often than not taken the form of a classificatory discourse into the mobility of particular sub-groups as measured by such variables as age, sex, religion, ethnicity, income and family status. Finally, considerable attention has been given to the problems faced by new arrivals and their integration within the urban community. The vast majority of these studies have concerned themselves with the examination of rural-urban movements in western industrialised countries. Where studies of the underdeveloped world have taken place, in most cases they have borrowed the theoretical formulations and "push-pull" theories developed from western experience. Given the volume and significance of rural-urban migration in the underdeveloped world such a state of affairs is disturbing.

It is suggested here that the Southwest Pacific area in general and the Cook Islands in particular provide a unique environment from which to draw empirical evidence about population movements. To a large extent, migration from isolated atoll village or from volcanic Island village to Rarotonga represents a continuing process which reaches its culmination in the rural or urban areas of New Zealand. To this extent, migration is essentially a spatial manifestation of economic development and a major symptom of basic social change.

It has already been argued elsewhere that most of the theoretical formulations of migration so far advanced do not provide a satisfactory explanation of rural-urban migration as a spatial process whose dynamics and spatial impact must form part of any comprehensive understanding of the phenomenon (See Mabogunje, 1970:2). With this in mind, it is the present author's contention that such an understanding can best be approached within the framework of General Systems Theory. (See von Bertalanffy, 1950; 1956; 1962; 1968). This sort of approach demands that a particular grouping of variables be recognised as a system possessing certain properties common to most other systems. Such a scheme offers the

human geographer a viable construct with which to examine a whole range of questions relevant to the study of migration.

The Systems Model

A System may for present purposes be defined as a complex of interacting elements, together with their attributes and relationships. (Hall and Fagen, 1956:18). The analytical system's model demands that we treat the phenomena and the concepts for organising the phenomena as if there existed organisation, interaction, interdependency, and integration of parts and elements. Systems analysis has as its prime objective, therefore, the consideration of the complex interrelated whole as opposed to the study of individual parts separately (Elliot Hurst, 1968:1). In order to specify what is a part of the system we need to define its boundary confines. The boundary of a system may exist physically, such as the number of people in a particular group or we may delimit a system in a less tangible manner, by placing the boundary according to what variables we wish to focus on. The operational definition of boundary is the line forming a closed circle around selected variables, where there is less interchange of energy (or communication) across the boundary of the circle than within the delimiting line (Chin, 1961:203). A system may be thought of as being isolated if it exchanges neither matter (in this case migrants and institutions), nor energy (the capacity of any given body to do work) with the environment; closed if it exchanges energy but not matter; and open if it exchanges both. A system is assumed to have a tendency towards a balance among the various forces operating within and upon it. When this balance is thought of as a fixed point or level, a state of equilibrium exists. There are a variety of kinds of equilibria. Stationary equilibrium exists when there is a level of balance to which the system returns after any disturbance. On the other hand, dynamic equilibrium is said to

exist when the equilibrium shifts to a new position and makes an adjustment in response to some disturbance. As well as the input and output of energy into the system, balance (homeostasis) can be achieved by feedback processes. These feedback processes are of particular significance to the study of migration. Open systems are never closed off completely. They have inputs and outputs across their boundaries and they affect and are affected in turn by their environment. The feedback mechanism normally consists of a receptor organ, a unit for processing all incoming information and transmitting it to an effector agent which responds in such a way that there is a related output of energy. Finally, the functioning of the effector is monitored back to the receptor by means of feedback mechanisms thus making the system self-regulating (Von Bertalanffy, 1968: 42-43). Positive feedback serves to amplify deviations from equilibrium (in the migration case to stimulate further migration) while negative feedback will militate against any change and encourage a return to the original situation (in the migration case to stifle further migration).

At the outset it is imperative to identify the basic interacting elements and to recognise that a system operates not in a void but in a special environment and that any change in any of the environmental attributes will effect a change in the nature of the system itself.

In the past, scholars concerned with the study of migration usually approached their problem by reducing migration to its component parts and then proceeded to investigate each part independently from its fellows. One of the greatest values of systems analysis is that it invites us to see migration as a coherent functioning whole.

Most of the formulations of the "push-pull" hypothesis pre-suppose that people move from rural to urban areas because of two overriding general factors, namely population pressure and

environmental deterioration in the rural area (the "push" factor) and the lure and attractions of the city itself (the "pull" factor). Such an approach tends to exclude consideration of differential individual motivations and responses to stimuli transmitted both from the environment and from within the migration system itself.

Figure VI.5 indicates the basic elements involved in the Cook Island's migration system as well as the environment within which the system functions. Such a model shows that interest centres not only on why people move but on all the implications and ramifications of the process. Questions such as, what impact does the flow of information back from New Zealand have on the rural villager, what institutions and agencies encourage or discourage movement or why do some individuals respond more promptly than others to the information flow can easily be built into the framework.

It has already been shown that population movement has been a characteristic of the Cook Island environment for well over 120 years and that the breakdown in isolation between Rarotonga and the Outer Islands was in many ways a product of the socio-economic development of that Island. This breakdown in isolation thrust many of the more remote Islands into contact with an urban-based civilisation and sharpened awareness of the wide range of social, economic and employment opportunities available. The favourable attitude of the territorial and New Zealand government (including some employers in New Zealand) to emigration to New Zealand and the growth of a large Cook Island community in that country consequent on this, added a further dimension. The strong link retained between Islanders in New Zealand and their kinsfolk back in the Islands manifested itself in the steady flow of information, money, foodstuffs and other items back to the Islands. Pressure of population on existing resources has not been as vital a problem as elsewhere in the Southwest Pacific. More potent have been the problems associated with cash cropping given

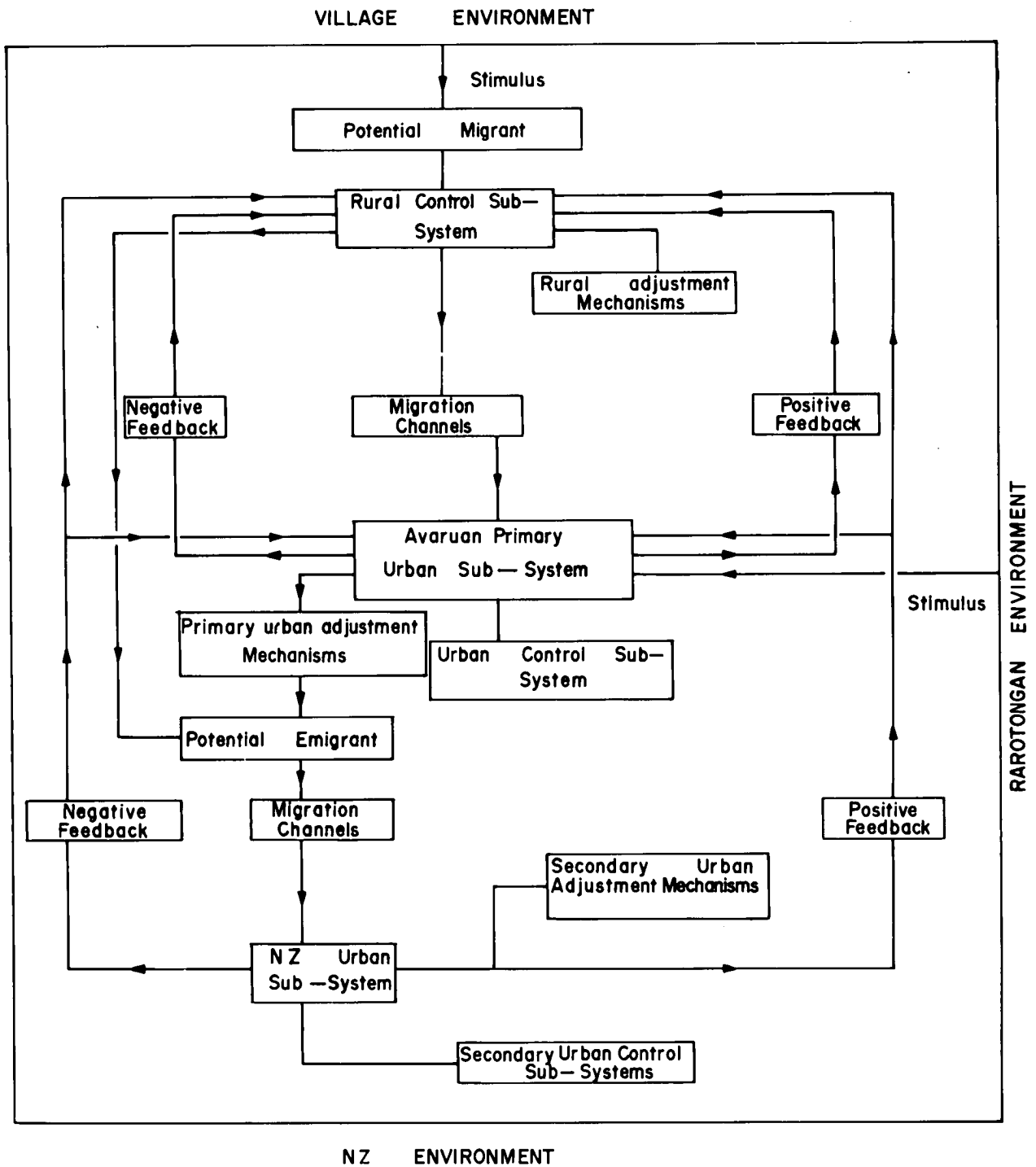


Fig. VI.5 Systems Model of Cook Island Migration.

the rigidity of the traditional land tenure system and the experience of irregular shipping, insecure markets and fluctuating price levels. This together with administrative neglect of economic development in favour of a wide range of social welfare schemes, has served to produce a severely depressed agricultural situation. Today, by consequence, the isolated village community resembles something of an under-developed region within an area of generally expanding development.

This then constitutes the broad environment within which the system of migration operates. It is this environment which encourages the villager to abandon his traditional communal way of life and move to either Rarotonga or New Zealand. The central elements in the migration system are depicted in Figure VI.5. This figure identifies the potential migrant (and potential emigrant) who is encouraged to migrate by stimuli from the environment as well as by positive stimuli (feedback) from the Rarotongan and New Zealand sub-communities. Within this system attention is also focused on the migration flow and the various sub-systems and adjustments mechanisms which are essential parts of the migrants transformation.

The changes associated with the adoption of new urban forms may be equated with energy flows. This additional energy, expended through positive feedback networks acts as a stimuli on the rural villager to migrate. Given the present stage of the migration process it is very doubtful whether the two general causes postulated by the "push-pull" school are particularly applicable to Cook Island conditions. As Mabogunje has pointed out, the "push-pull" hypothesis has relevance in migrational studies only at the aggregate level (Mabogunje, 1970:10); and does not always provide a satisfactory answer to the question why individual migrants move to the city. As has already been pointed out, once many villagers have actually moved to New Zealand and experienced New Zealand conditions, their recall of motives and reasons does

not necessarily always tell us very much about the factor or factors responsible for dislodging them in the first place. Within the systems framework, the explanation of why people move may be couched in terms of individual responses to stimuli transmitted from the environment and feedback from within the system itself. Today, the stimulus to migrate is very much related to the size and activity of the Outer Island community on Rarotonga and the Cook Island community in New Zealand. From these sources, information, money and material goods flow back through the system to the local environment stimulating and encouraging villagers to migrate. Stimulation from this source can not be underestimated. On the basis of an Auckland survey carried out by the writer, two-thirds of all Cook Island households were remitting money back to the Islands at a mean monthly rate of \$14.93. If this figure is extrapolated for all Cook Island households in Auckland, then something in the region of \$6,000 - \$8,000 would flow back to the Islands every month. Once a villager is dislodged from his traditional rural habitat he translates his 'potential energy' into actual or 'kinetic energy' (the capacity of a body to do work by virtue of its own motion or activity). This achieved, our first concern is not so much with the cost or distance and direction of movement but rather with the time spent on Rarotonga and with the adjustments made. Once in Rarotonga the migrant consciously or unconsciously stimulates further migration by feedback processes transmitting back to his kinsfolk and friends information about his reception, job, salary, living costs and so on. Although most Outer Islanders migrate first to Rarotonga and thereafter to New Zealand, this does not necessarily imply that the Rarotongan urban sub-system always provides a climate conducive to further migration. Many Outer Islanders, especially those from the more remote Northern Atolls, find conditions in Rarotonga not always to their liking and although impressed by their first sight of mountains, motor vehicles, films and the varied and well-stocked shops, they none-the-less find difficulty in integrating with the closely-meshed Rarotongan social network. Besides this, a regular job is often difficult to obtain and it is almost impossible for the Outer Islander to supplement his meagre cash income by growing food crops as he has no access to land.